

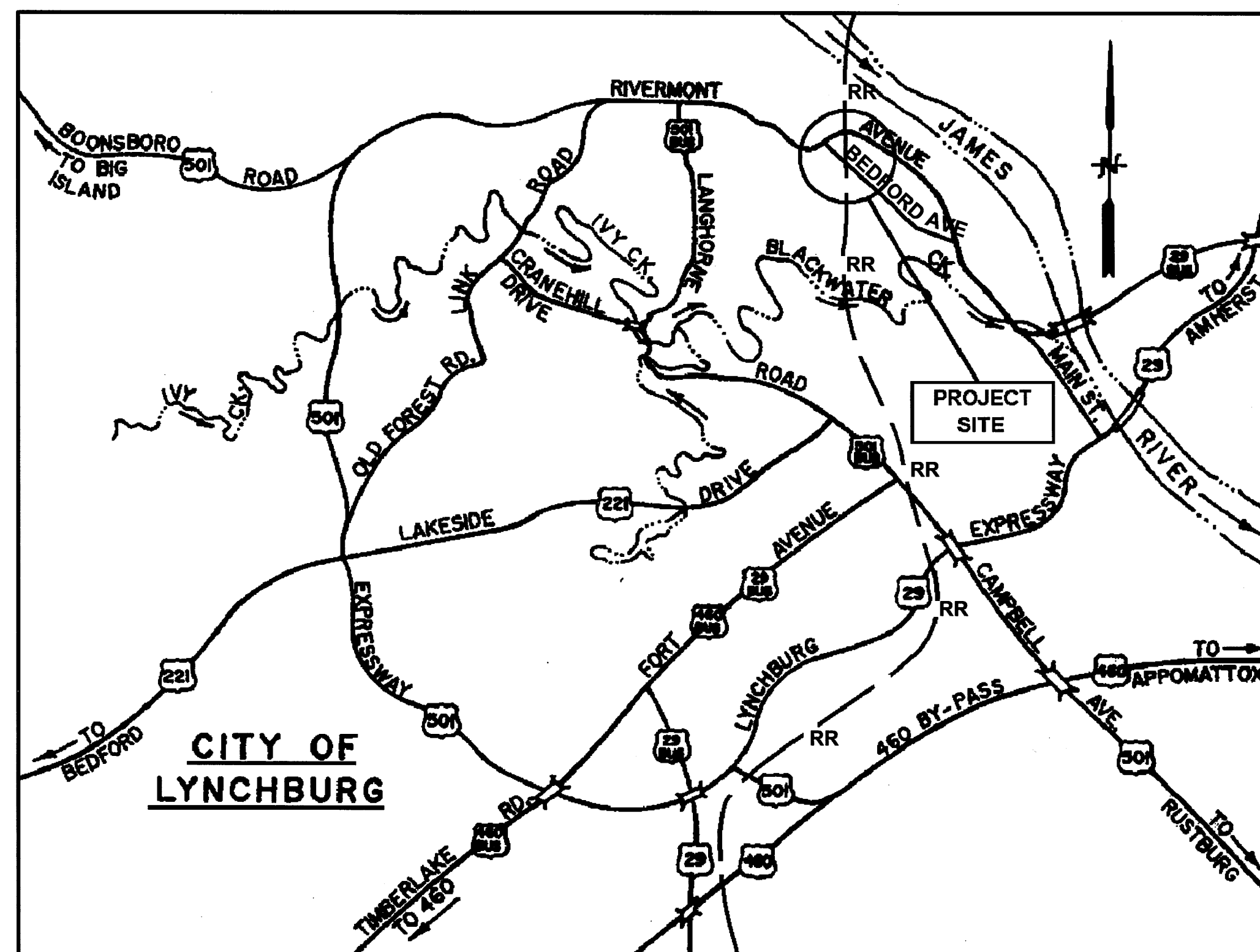
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HSMI-Talbot RE: 03036BR-1901



DEPARTMENT OF PUBLIC WORKS

ENGINEERING DIVISION

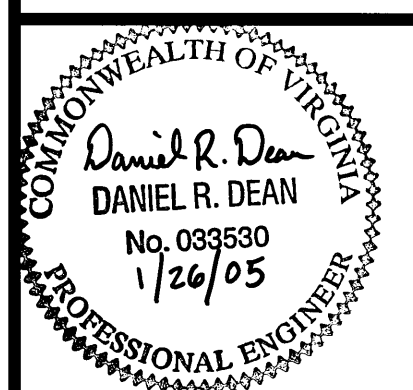
PROPOSED REHABILITATION OF BEDFORD AVENUE BRIDGE OVER NS RAILWAY



LOCATION MAP
NOT TO SCALE

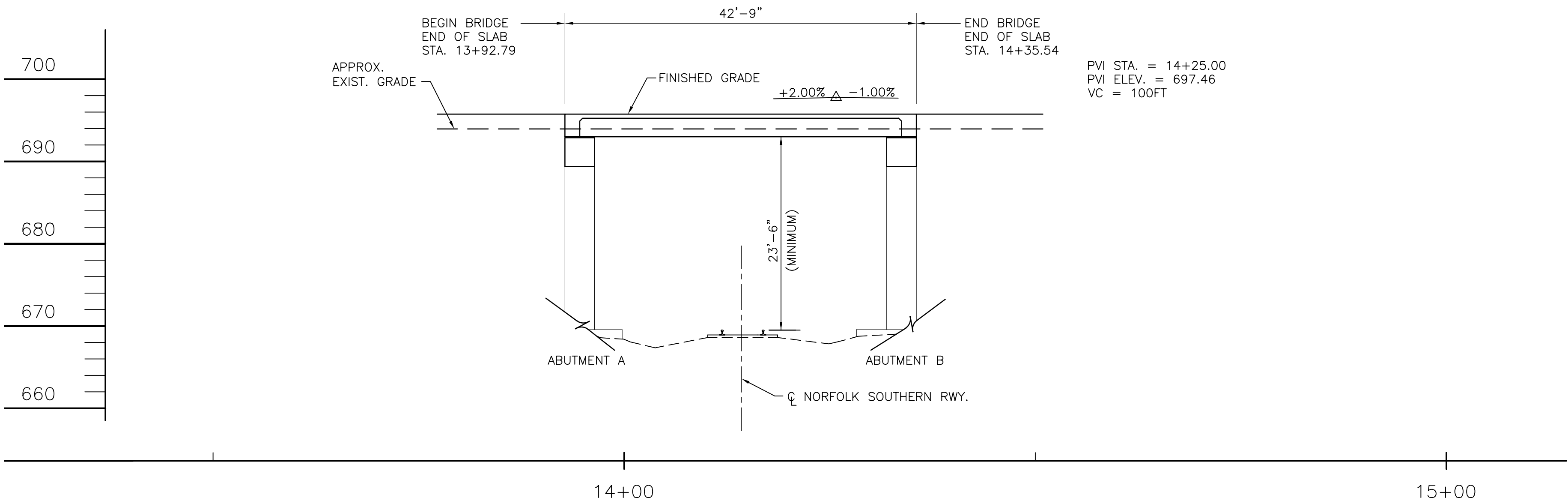
INDEX OF SHEETS

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3	ESTIMATED QUANTITIES & DEMOLITION DETAILS
4	TYPICAL DECK SECTION
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PLANS REVISED		APPROVED	
SHEET NO.	DATE	2/3/05	<i>[Signature]</i>
		DATE	DIRECTOR OF ENGINEERING
		APPROVED	
		DATE	CONSTRUCTION ENGINEER
PROJECT NO.: 03036-BR			
DATE: 14 JAN. 2005			
SHEET 1 OF 24			

\\VA-FILES\3000SERIES\30089A\CADD\DWG\0303680000.DWG, C:\030368 07/04/2005 10:19:24, KFIELD
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GENERAL NOTE:

WIDTH: 5'-0" SIDEWALK, 40'-0" ROADWAY, 5'-0" SIDEWALK.

SPAN LAYOUT: 42'-9" PRESTRESSED CONCRETE BEAM.

CAPACITY: HS20-44 LOADING AND ALTERNATE MILITARY LOADING.

SPECIFICATIONS:

CONSTRUCTION:
VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, 2002.
CITY OF LYNCHBURG MANUAL OF SPECIFICATIONS AND STANDARD DETAILS.

DESIGN: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1996; 1997 AND 1998 INTERIM SPECIFICATIONS; AND VDOT MODIFICATIONS.

STANDARDS:
VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, 2001.
CITY OF LYNCHBURG MANUAL OF SPECIFICATIONS AND STANDARD DETAILS.

THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION WORK AREA PROTECTION MANUAL, JANUARY 2003.

DESIGN LOADING INCLUDES 20 P.S.F. ALLOWANCE FOR CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS.

CONCRETE IN PRESTRESSED MEMBERS SHALL BE CLASS A5. CONCRETE IN SUPERSTRUCTURE INCLUDING SIDEWALKS, PARAPETS, AND TERMINAL WALLS SHALL BE CLASS A4; IN SUBSTRUCTURE, CLASS A3.

DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60; TIE BARS IN PIER COLUMNS AND PILES MAY BE GRADE 40. ALL REINFORCING BAR DIMENSIONS ON THE DETAILED DRAWINGS ARE TO CENTERS OF BARS EXCEPT WHERE OTHERWISE NOTED AND ARE SUBJECT TO FABRICATION AND CONSTRUCTION TOLERANCES.

FOUNDATIONS FOR SIDEWALK ABUTMENTS SHALL BE CONSTRUCTED ON FIRM MATERIAL WITH A SAFE ALLOWABLE BEARING CAPACITY OF 3000 P.S.F.

CONTRACTOR SHALL TAKE EXTREME CAUTION IN HIS OPERATIONS SO THAT NO DAMAGE IS DONE TO UTILITIES IN THE VICINITY OF BRIDGE OR ON THE BRIDGE.

THE CONTRACTOR SHALL VERIFY, IN FIELD ALL DIMENSIONS, SKEW AND ELEVATIONS BEFORE BEGINNING CONSTRUCTION AND BEFORE SUBMITTING SHOP DRAWINGS.

ALL EXISTING CONCRETE REMOVED SHALL BE REMOVED TO HORIZONTAL AND VERTICAL PLANES ONLY AND TO SOUND CONCRETE.

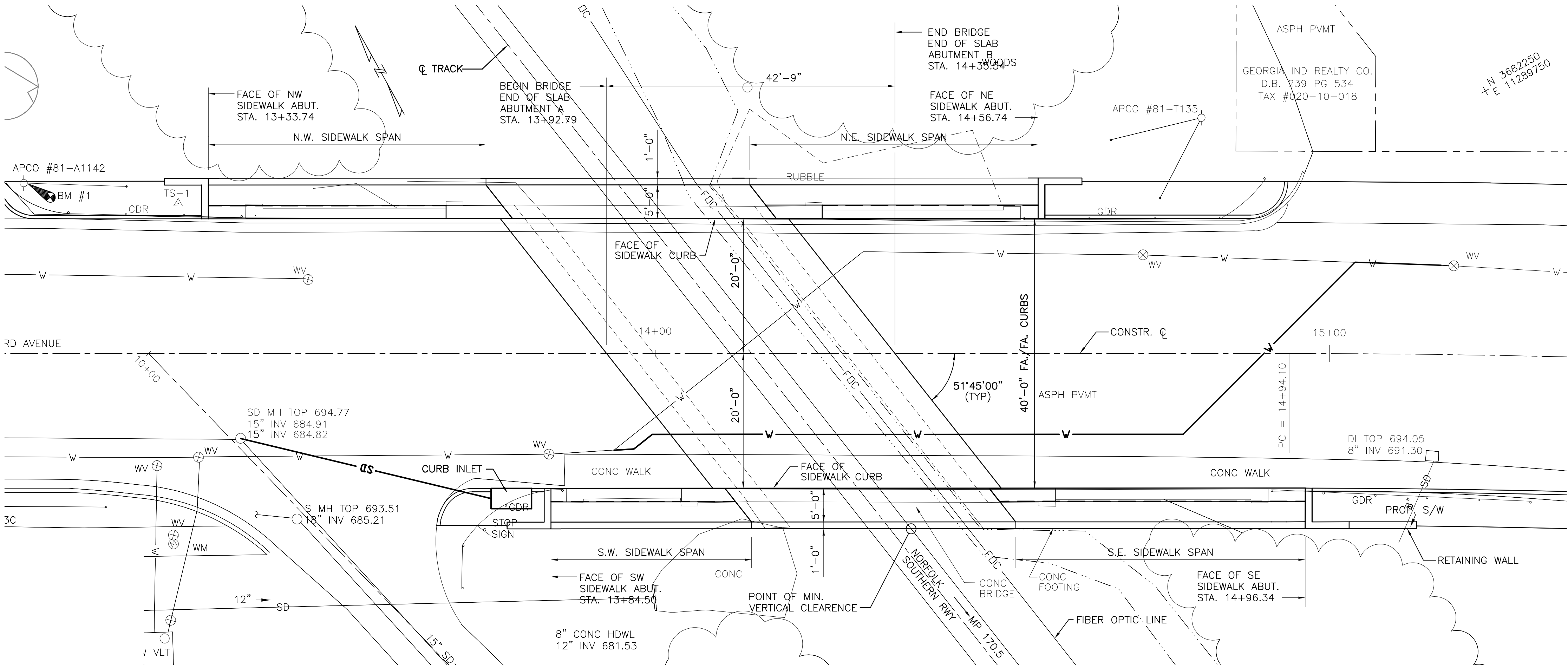
EDGES OF AREAS TO BE REPAIRED SHALL BE SAW CUT TO A DEPTH OF 1" OR TO A DEPTH THAT WILL JUST CLEAR THE REINFORCING STEEL. NO FEATHER EDGES WILL BE PERMITTED BETWEEN THE NEW AND OLD CONCRETE.

BRIDGE NUMBER OF EXISTING BRIDGE IS 1849. PLANS FOR THE EXISTING STRUCTURE ARE NOT AVAILABLE.

BENCHMARK: TOP OF CONCRETE MONUMENT FOUND ON THE SOUTH SIDE OF BEDFORD AVENUE, LOCATED NEAR CORNER OF CURB AND GUTTER FOR PARKING LOT AND ABOUT 45 FEET WEST OF HOLLINS MILL ROAD EL=695.56

SYMBOLS & ABBREVIATIONS:

CL	AT CENTERLINE		
Ø	DIAMETER		
ABUT.	ABUTMENT	STD.	STANDARD
APPROX.	APPROXIMATE	TYP.	TYPICAL
ASPH	ASPHALT	U.N.O	UNLESS NOTED OTHERWISE
BM	BENCH MARK	W/	WITH
BOT.	BOTTOM	W.P.	WORKING POINT
BRG.	BEARING		
CLR.	CLEAR		
CONC.	CONCRETE		
CONSTR.	CONSTRUCTION		
E.F.	EACH FACE		
EL.	ELEVATION		
EQ.	EQUAL		
EXIST.	EXISTING		
F.F.	FAR FACE		
FA \ FA.	FACE TO FACE		
GDR, GR	GUARD RAIL		
JT.	JOINT		
MAX.	MAXIMUM		
MIN.	MINIMUM		
N.F.	NEAR FACE		
PGL	PROPOSED GRADE LINE		
PRESTR.	PRESTRESSED		
PROJ.	PROJECTION		
PROP.	PROPOSED		
PVMT	PAVEMENT		
REINF.	REINFORCING		
REQ'D	REQUIRED		
RWY.	RIGHT-OF-WAY		
S/W	SIDEWALK		
SPA.	SPACES		
STA.	STATION		



HSM

TRANSPORTATION

COMM. NO. 30089A

PLAN

SCALE: 1" = 10'

THE CITY OF LYNCHBURG, VIRGINIA
DEPT. OF PUBLIC WORKS
ENGINEERING

BEDFORD AVE. BRIDGE OVER NS RWY

GENERAL PLAN, ELEVATION & GENERAL NOTES

DESIGNED BY: WRT DRAWN BY: KSF CHECKED BY: DRD

NO. DESCRIPTION DATE SCALE: AS NOTED PROJECT NO.: 03036-BR

REVISIONS DATE: 14 JAN. 2005 SHEET: 2 OF 24

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ESTIMATED QUANTITIES – BRIDGE													
		CONCRETE *		REINF. STEEL	EPOXY COATED REINF. STEEL	PRESTR. CONC. BOX BEAM *	CONCRETE PARAPET * ⊗	BRIDGE DECK GROOVING ⊗	STRUCTURE EXCAVATION ⊗	POROUS BACKFILL ⊗	PEDESTRIAN FENCE	CONCRETE SURFACE PENETRANT SEALER	CONCRETE SUBSTRUCTURE SURFACE REPAIR
		CLASS A3	CLASS A4										
		CY	CY	LB	LB	LF	LF	SY	CY	CY	LF	SY	SY
SUPERSTRUCTURE		—	96.9 **	—	11,450 ⊗	435	235	190	—	—	200	459	—
ABUTMENT A	NEAT	50.0	—	5300	—	—	—	—	38	38	—	—	80
ABUTMENT B	NEAT	57.0	—	5800	—	—	—	—	42	42	—	—	44
SIDEWALK ABUTMENTS	NEAT	15.0 ⊗	—	1700	—	—	36	—	103	—	—	—	—
	FOOTING	14.0	—	3200	—								
TOTAL		136.0	96.9	16,000	11,450	435	271	190	183	80	200	459	124

⊗ DENOTES ITEMS TO BE PAID FOR ON BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH THE SPECIFICATIONS.

FOR ESTIMATE OF QUANTITIES FOR ROADWAY, SEE SHT. 19.

* LOW PERMEABILITY CONCRETE SHALL BE USED.

** QUANTITY INCLUDES AN EXTRA 1/2 INCH OF CONCRETE IN THE DECK THICKNESS, PER VDOT RBS SECTION 404.08.

⊗ QUANTITY INCLUDES VDOT STD. RW-3 RETAINING WALL AT S.E. SIDEWALK ABUTMENT.

LUMP SUM ITEMS

MOBILIZATION – LUMP SUM

CONSTRUCTION SURVEYING – LUMP SUM

DISMANTLE AND REMOVE PORTION OF EXISTING STRUCTURE – LUMP SUM

ANTI-GRAFFITI PROTECTION – LUMP SUM

WATER LINE SYSTEM – LUMP SUM

THE PAY ITEM "DISMANTLE AND REMOVE PORTION OF EXISTING STRUCTURE" SHALL INCLUDE DEMOLITION AND REMOVAL OF THE EXISTING SUPERSTRUCTURE IN ITS ENTIRETY, AND PORTIONS OF ABUTMENTS AND WINGWALLS AS NOTED IN THESE PLANS.

THE PRICE BID FOR CONCRETE, CLASS A3 SHALL INCLUDE THE COST OF PREFORMED JOINT FILLER.

DEMOLITION NOTES:

PRIOR TO DEMOLISHING THE EXISTING SLAB SPAN, THE CONTRACTOR SHALL REMOVE ALL OVERLAYING PAVEMENT MATERIAL, INCLUDING ASPHALT, BRICK, GRAVEL, AND FILL. ANY BRICK ENCOUNTERED DURING DEMOLITION SHALL BE CONSIDERED HISTORIC AND SHALL BE SALVAGED AS PART OF THE WORK, AND DELIVERED TO THE CITY'S FACILITIES AT 1700 MEMORIAL AVENUE.

AT ALL TIMES, THE CONTRACTOR SHALL MAINTAIN THE MINIMUM TEMPORARY VERTICAL AND HORIZONTAL CLEARANCES FROM THE TRACK, AS SHOWN IN THE TEMPORARY CLEARANCE DETAIL.

THE CONTRACTOR SHALL COORDINATE THE DEMOLITION SCHEDULE WITH THE RAILROAD. ALL DEMOLITION WORK WITHIN THE TRACK AREA SHALL BE PERFORMED DURING THE TIME WINDOWS WHEN TRAINS ARE NOT PASSING THE WORKSITE.

THE CONTRACTOR SHALL SUBMIT A BRIDGE REMOVAL PLAN TO THE RAILROAD SEALED BY AN ENGINEER REGISTERED IN VIRGINIA. THE BRIDGE REMOVAL PLAN SHALL INCLUDE DETAILS, PROCEDURES AND THE SEQUENCE OF STAGED REMOVAL OF THE BRIDGE, INCLUDING ALL STEPS NECESSARY TO REMOVE THE BRIDGE IN A SAFE AND CONTROLLED MANNER. NO DEMOLITION OPERATIONS WILL BE PERMITTED OVER THE RAILROAD RIGHT OF WAY UNTIL THE SUBMITTED MATERIAL HAS BEEN REVIEWED AND COMMENTS PROVIDED.

A TRACK PROTECTIVE COVER SHALL BE CONSTRUCTED BEFORE BEGINNING DEMOLITION OF THE EXISTING SLAB SPAN SUPERSTRUCTURE AND MAY BE SUPPORTED BY FALSEWORK OR MEMBERS OF THE EXISTING STRUCTURE. TYPES OF PROTECTIVE COVERS THAT MAY BE ACCEPTABLE METHODS FOR PROTECTING THE TRACKS ARE:

- 1) A TRACK SHIELD COVER OVER THE TRACKS;
- 2) A FRAMED COVER OUTSIDE THE TRACK CLEARANCE ENVELOPE;
- 3) A CATCHER BOX OR LOADER BUCKET SUSPENDED UNDER DECKING AND PARAPETS OVERHANGING THE EXISTING SLAB.

IF A TRACK SHIELD IS USED, THE TRACK SHIELD SHALL:

- 1) BE DESIGNED BY THE CONTRACTOR AND SEALED BY AN ENGINEER REGISTERED IN VIRGINIA;
- 2) BE OF SUFFICIENT STRENGTH TO SUPPORT THE ANTICIPATED LOADS, AND TO SPAN BETWEEN ITS SUPPORTS WITHOUT BEARING UPON THE RAIL.
- 3) PREVENT ANY MATERIALS, EQUIPMENT, OR DEBRIS FROM FALLING ONTO THE RAILROAD TRACK. ADDITIONAL LAYERS OF MATERIALS SHALL BE FURNISHED AS NECESSARY TO PREVENT THE MATERIALS OR DEBRIS FROM SIFTING DOWN UPON THE TRACK.
- 4) PREFERABLY BE PREFABRICATED AND FURNISHED WITH LIFTING HOOKS TO SIMPLIFY REMOVAL. BEFORE REMOVAL, THE SHIELD SHALL BE CLEANED OF ALL DEBRIS AND FINE MATERIAL.

LONGITUDINAL SUPPORT TIMBERS FOR THE TRACK SHIELD SHALL NOT EXTEND ABOVE THE TOP OF RAIL WHEN THE SHIELD IS REMOVED. BLOCKING FROM THE TOP OF RAIL TO THE BOTTOM OF THE SHIELD MAY BE ATTACHED TO THE SHIELD. REMAINING TIMBERS SHALL BE ANCHORED.

CONSTRUCTION EQUIPMENT SHALL NOT BE PLACED ON THE TRACKS UNLESS TRACKS ARE PROTECTED. TRACK PROTECTION IS REQUIRED FOR ALL EQUIPMENT INCLUDING RUBBER-TIRED EQUIPMENT OPERATING WITHIN 25 FEET OF THE TRACKS.

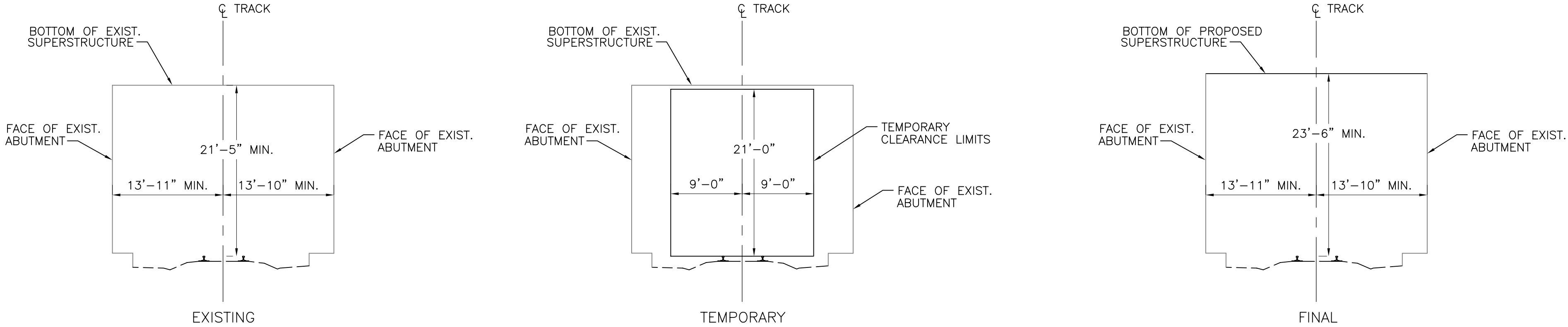
ALL DEBRIS AND REFUSE RESULTING FROM THE WORK SHALL BE REMOVED FROM THE RIGHT OF WAY BY THE CONTRACTOR AND THE PREMISES LEFT IN A NEAT AND PRESENTABLE CONDITION.

A FLAGMAN IS REQUIRED WHEN ANY WORK IS PERFORMED WITHIN 25 FEET OF THE NEAREST RAIL.

NO BLASTING WILL BE PERMITTED ON RAILROAD'S RIGHT-OF-WAY.

IF ANY TEMPORARY SUPPORTS INTERFERE WITH THE NATURAL DRAINAGE ALONG THE RAILROAD RIGHT-OF-WAY, A TEMPORARY DRAINAGE PLAN SHALL BE SUBMITTED FOR REVIEW AND COMMENT PRIOR TO CONSTRUCTING TEMPORARY SUPPORTS. THE PROPOSED DRAINAGE PLAN SHALL ROUTE ALL DRAINAGE AWAY FROM THE RAILROAD TRACKS.

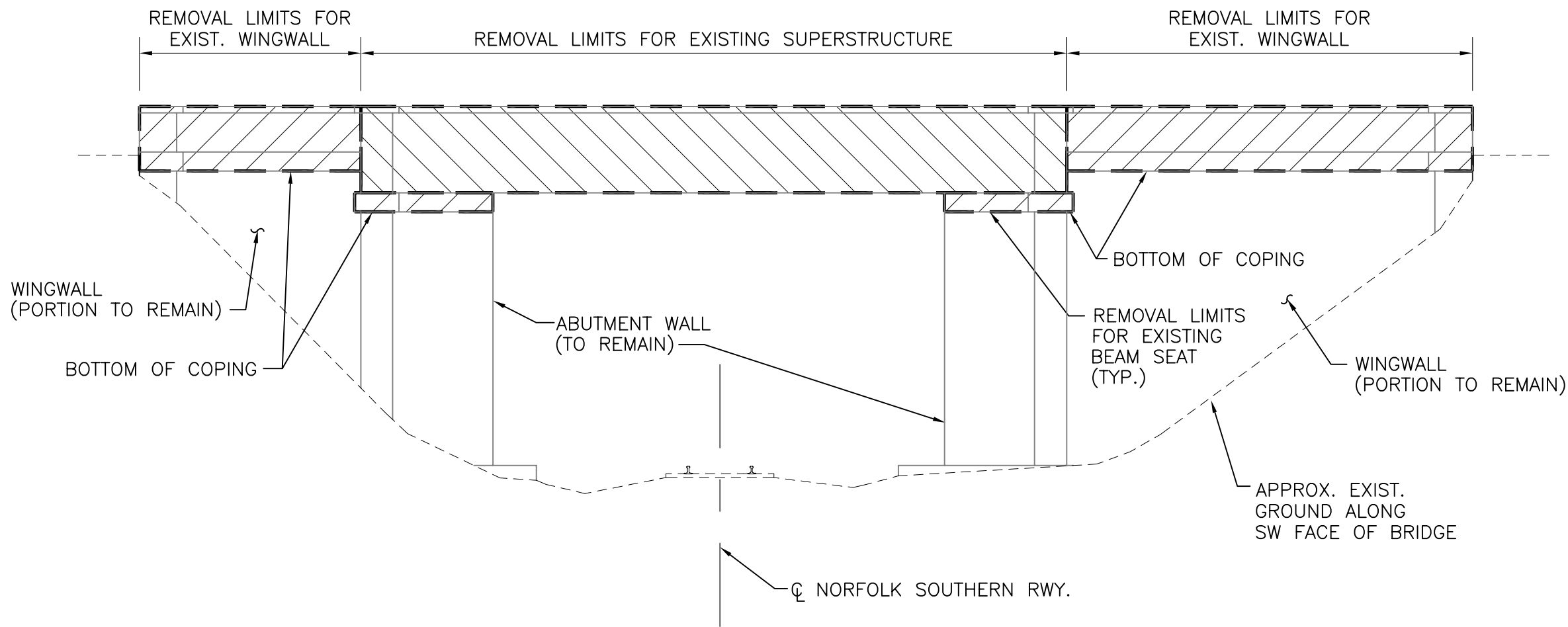
THE DEMOLITION OPERATIONS SHALL BE PLANNED SUCH THAT THE UNDERGROUND FIBER OPTIC LINES ALONG THE TRACK ARE OPERATING SAFELY AT ALL TIMES. THE FIBER OPTIC LINES SHALL BE PROTECTED IF AFFECTED BY DEMOLITION OPERATIONS.



RAILROAD CLEARANCE DIAGRAMS

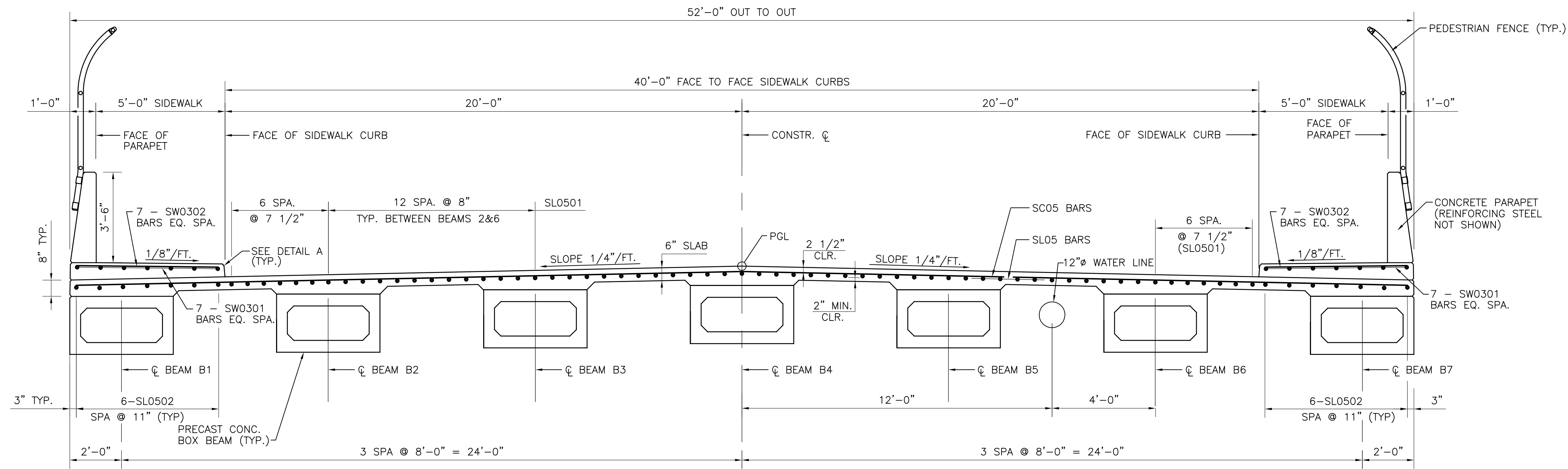
SCALE: 1" = 10'-0"

(LOOKING NORTH)



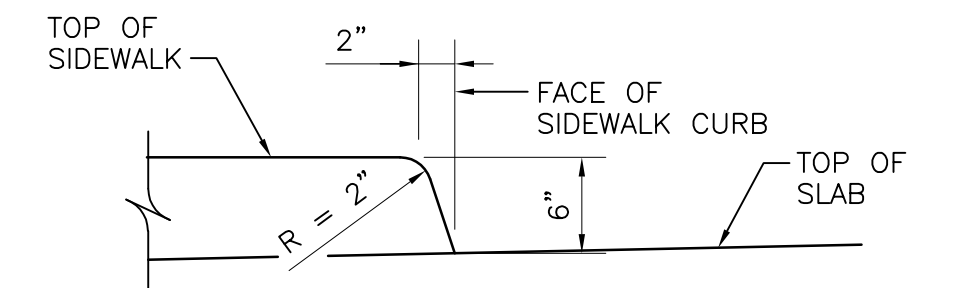
DEMOLITION LIMITS – ELEVATION

SCALE: 1" = 10'-0"



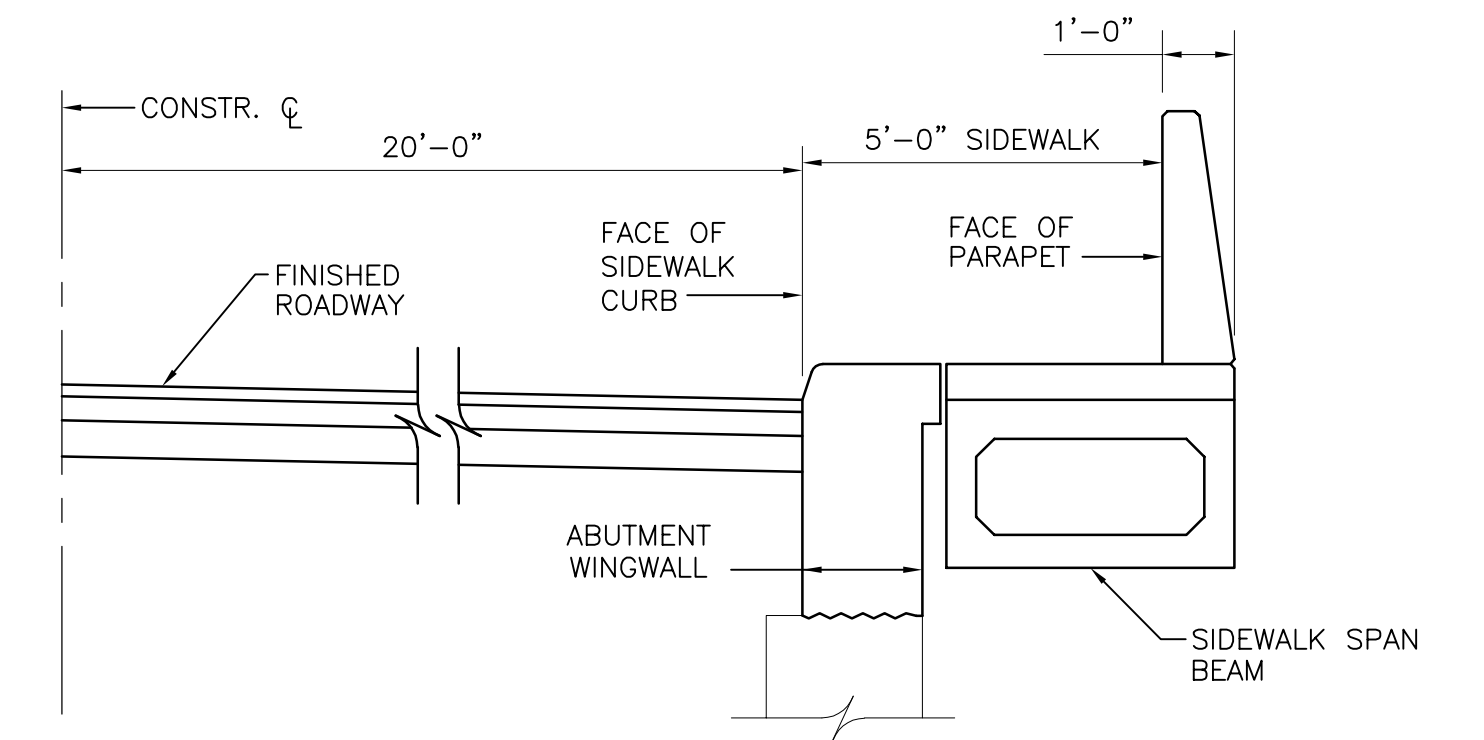
TYPICAL DECK SECTION

SCALE: $3/8" = 1'-0"$



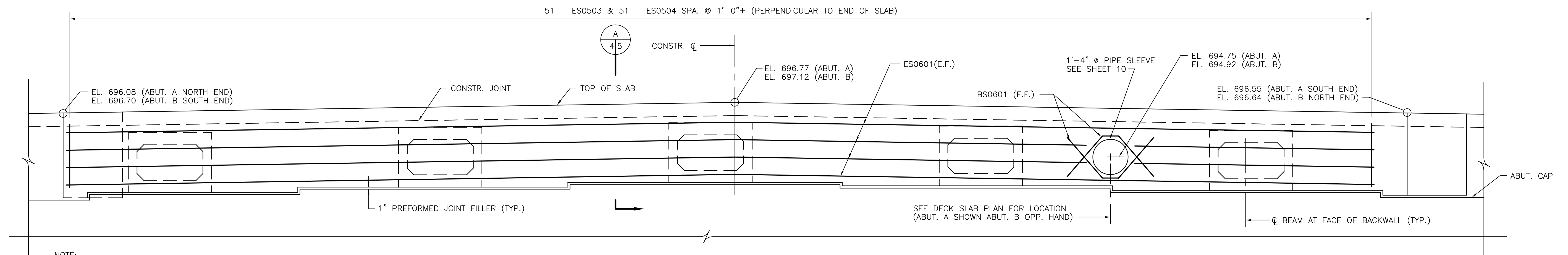
DETAIL A

SCALE: 1" = 1'-0"



TYPICAL PART SECTION – SIDEWALK SPANS

SCALE: $3/8" = 1'-0"$



NOTE:

ADJUST SPACING OF ES0503 BARS AND FIELD CUT ES0601 BARS
AS NECESSARY TO CLEAR WATER LINE SLEEVE.


BACKWALL ELEVATION

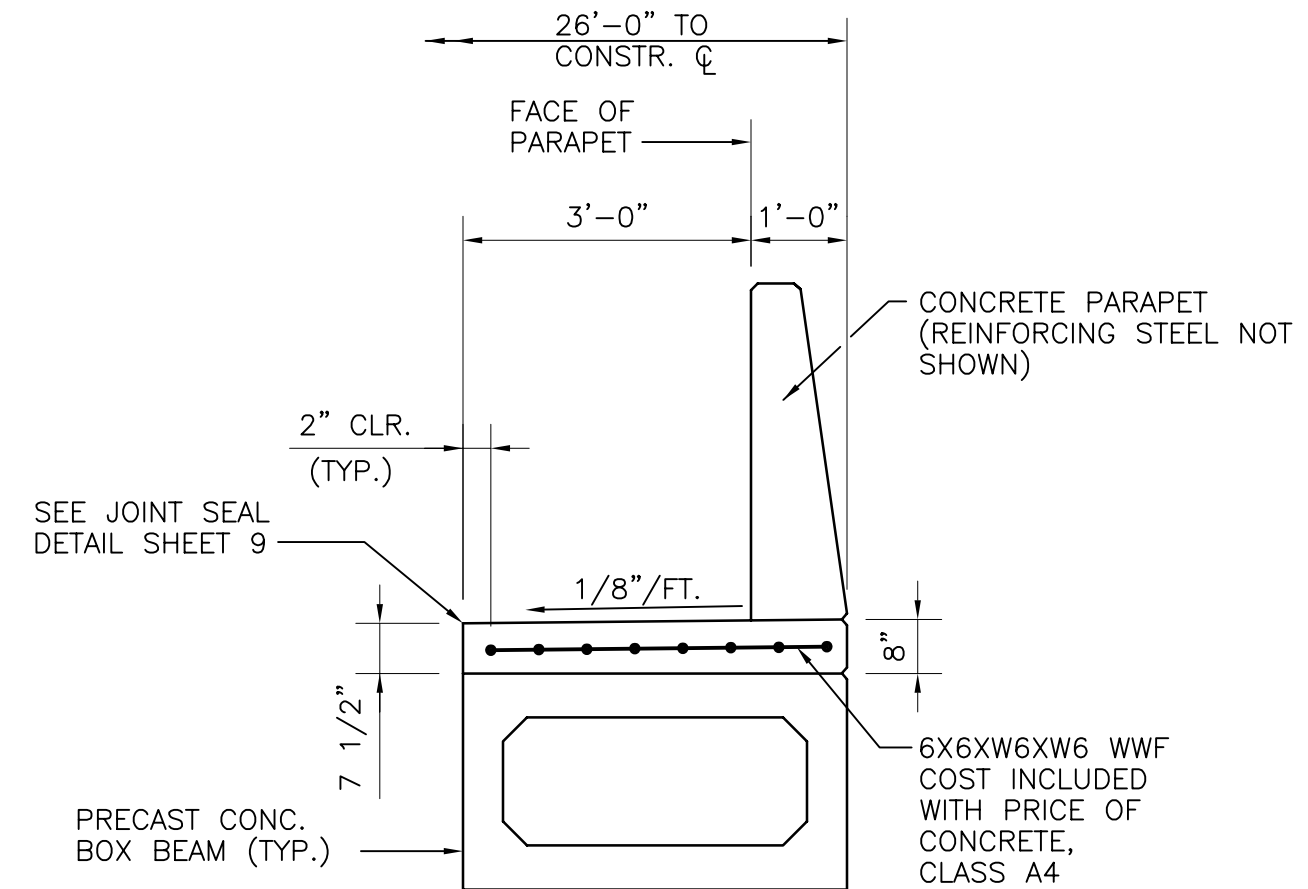
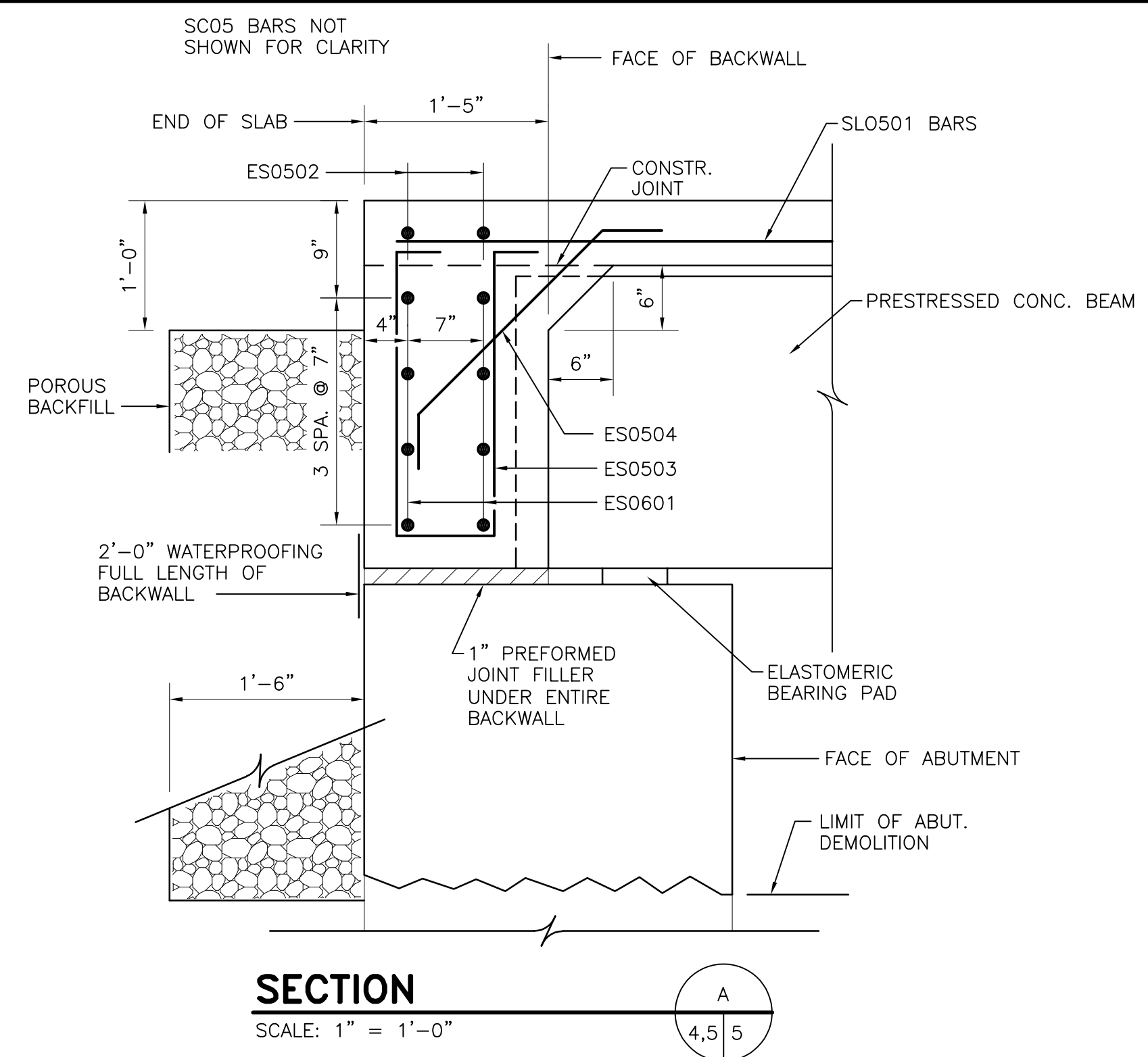
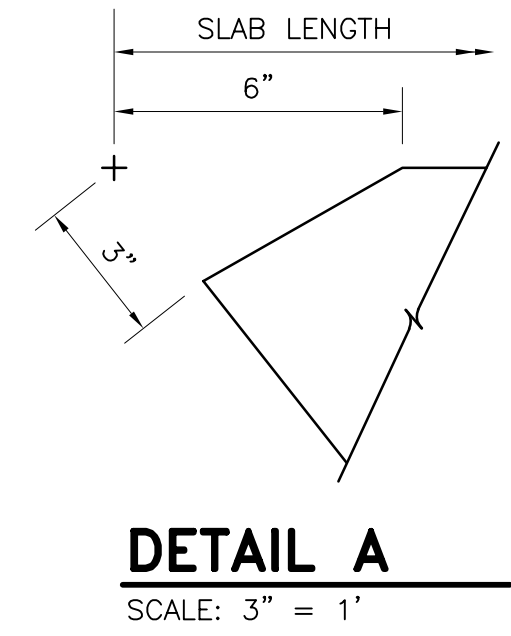
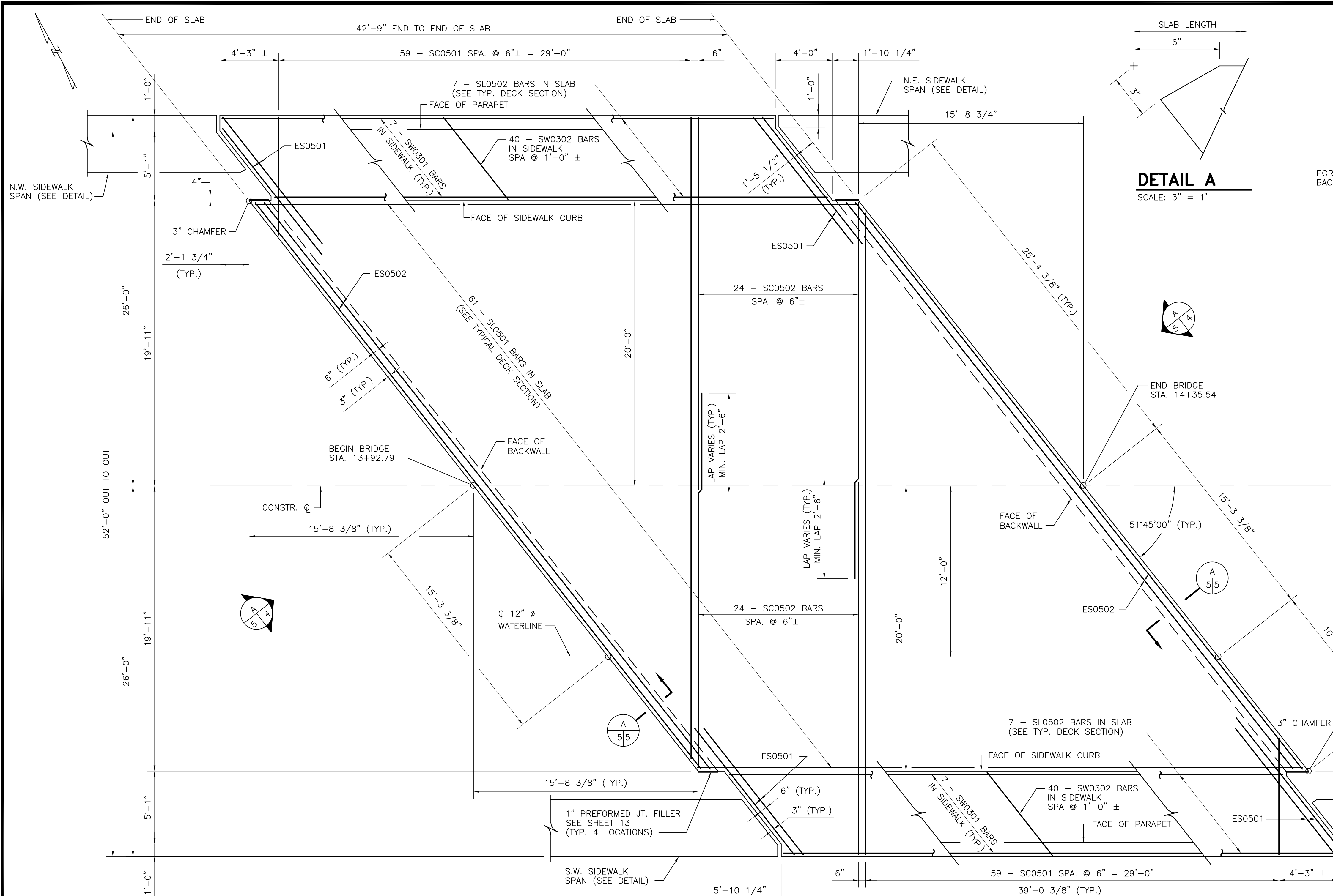
SCALE: 1/2" = 1'-0"

LOOKING EAST

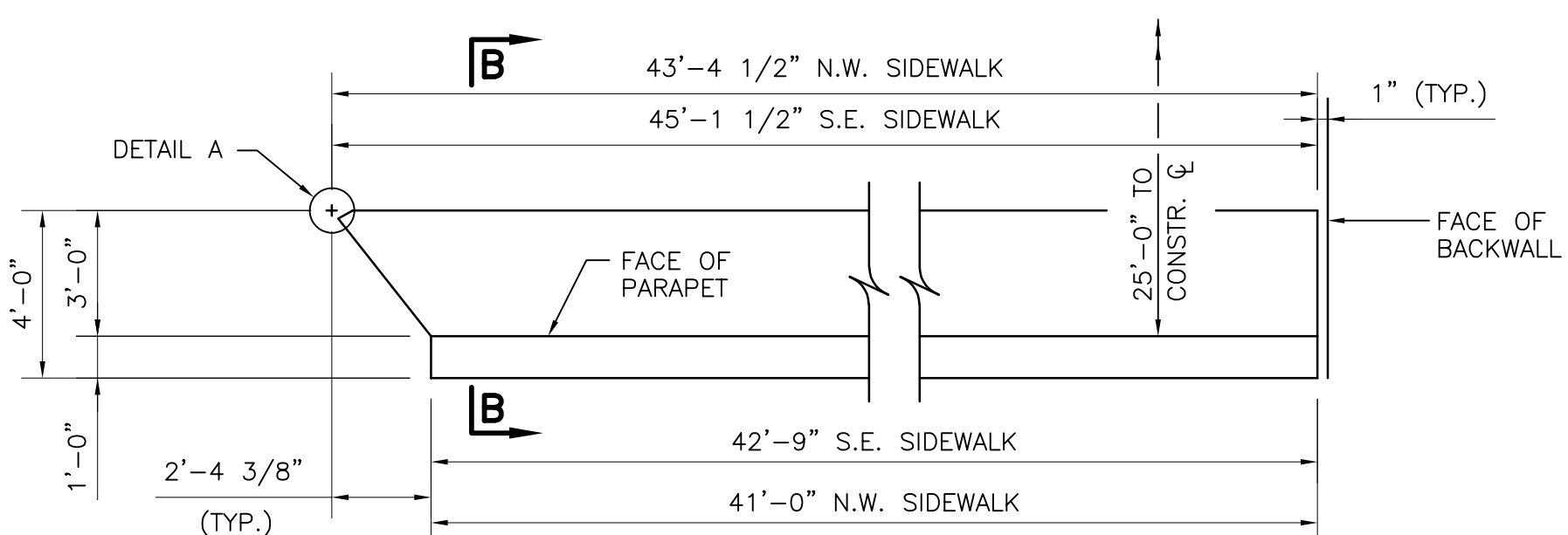
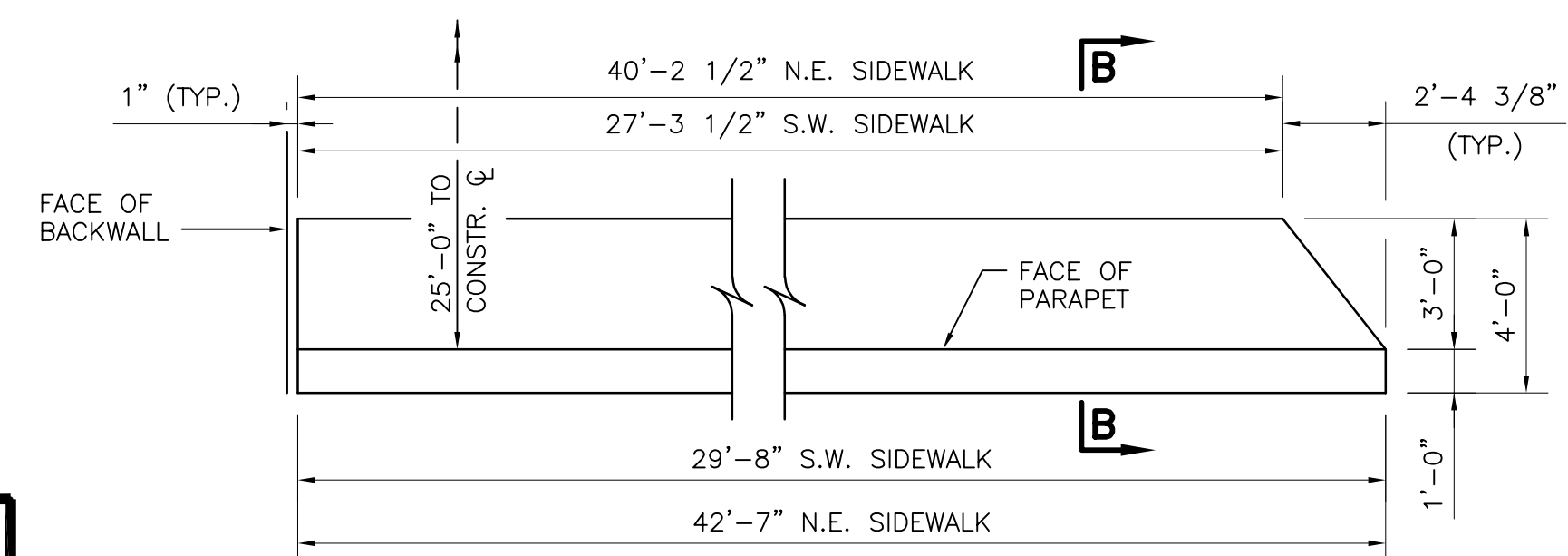
ABUT. A SHOWN
ABUT. B AS NOTED

TOP OF SLAB ELEVATIONS											
	BEGIN BRIDGE END OF SLAB 0.0L	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	END BRIDGE END OF SLAB 1.0L
Face of North Curb	696.08	696.16	696.24	696.31	696.37	696.43	696.48	696.53	696.57	696.61	696.64
PGL	696.77	696.83	696.88	696.93	696.98	697.01	697.05	697.07	697.09	697.11	697.12
Face of South Curb	696.55	696.59	696.62	696.65	696.67	696.69	696.70	696.71	696.71	696.71	696.70

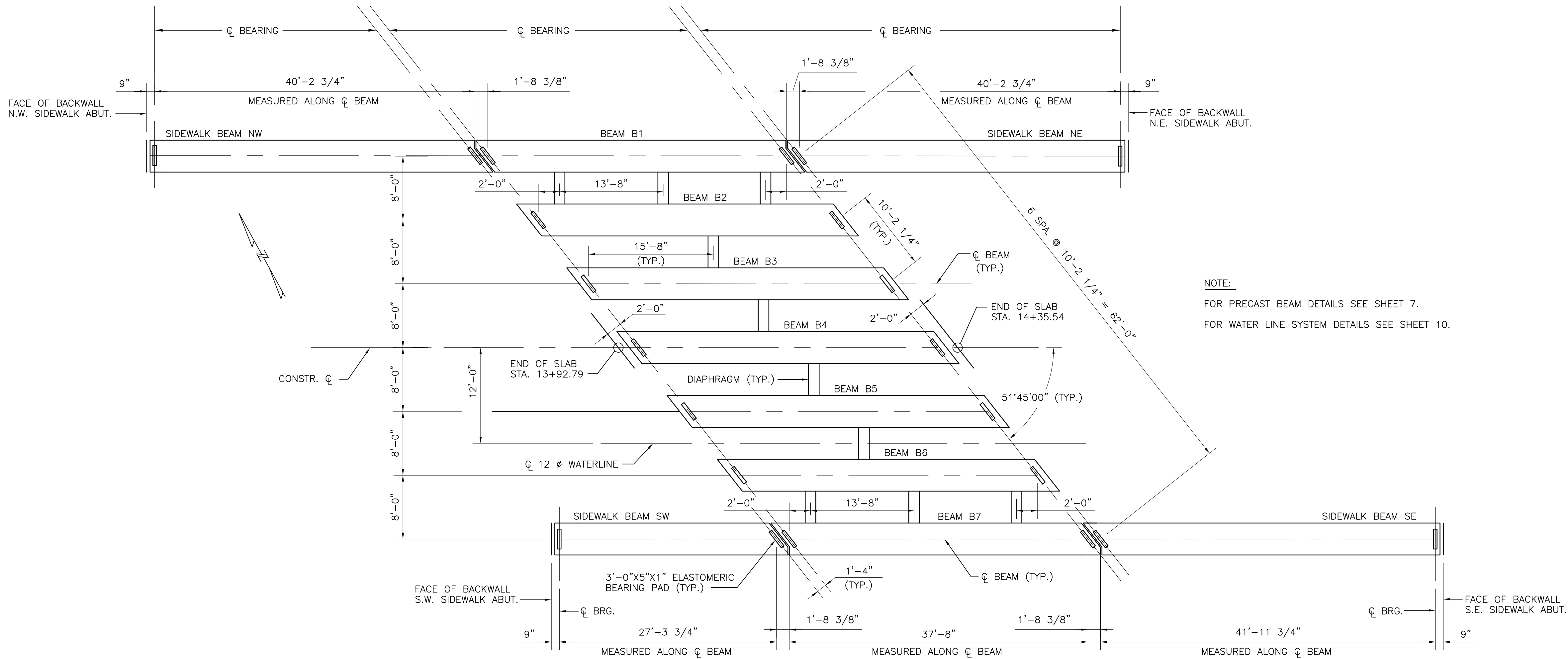
			THE CITY OF LYNCHBURG, VIRGINIA  DEPT. OF PUBLIC WORKS ENGINEERING BEDFORD AVE. BRIDGE OVER NS RWY		
			TYPICAL DECK SECTION		
			DESIGNED BY: JAW DRAWN BY: KSF CHECKED BY: DRD		
NO.	DESCRIPTION	DATE	SCALE: AS NOTED		PROJECT NO.: 03036-BR
	REVISIONS		DATE: 14 JAN. 2005		SHEET: 4 OF 24



- NOTES:
1. FOR BEAM DETAILS, SEE SHEET 7.
 2. FOR DIAPHRAM DETAILS, SEE SHEET 6.
 3. FOR JOINT SEAL DETAILS, SEE SHEET 9.
 4. FOR PARAPET DETAILS, SEE SHEET 8.



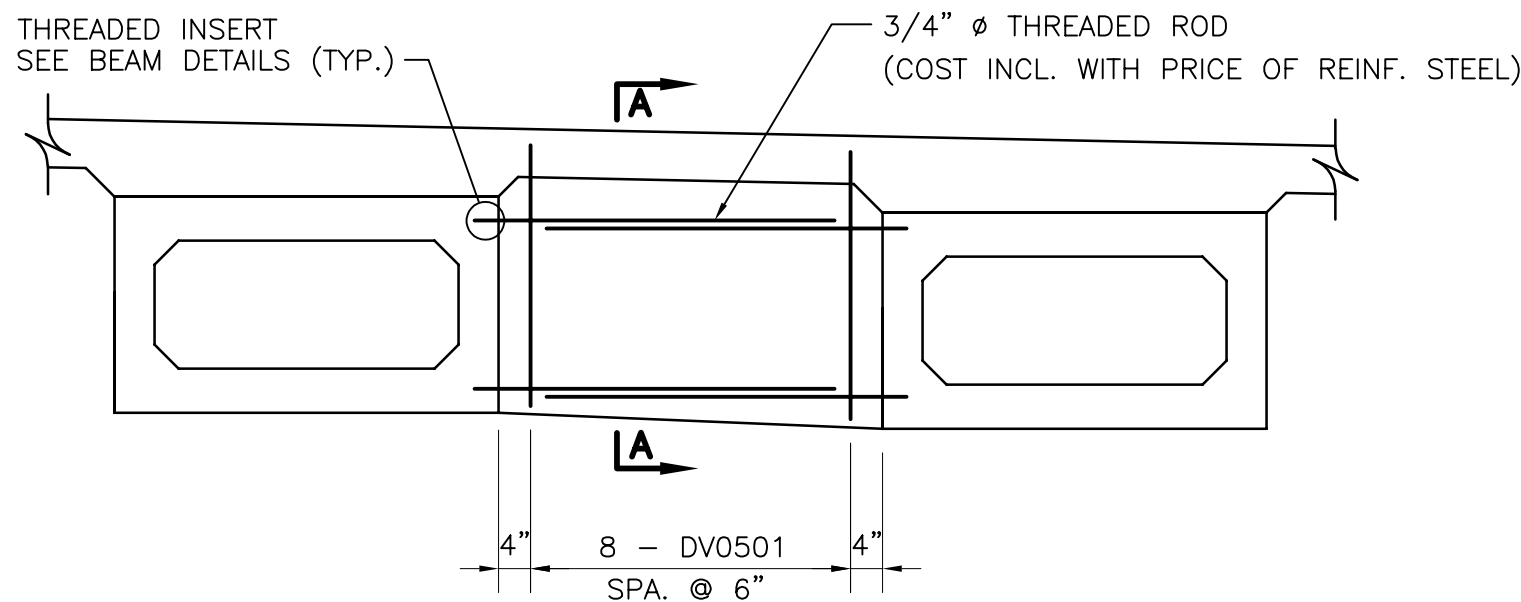
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NOTE:
FOR PRECAST BEAM DETAILS SEE SHEET 7.
FOR WATER LINE SYSTEM DETAILS SEE SHEET 10.

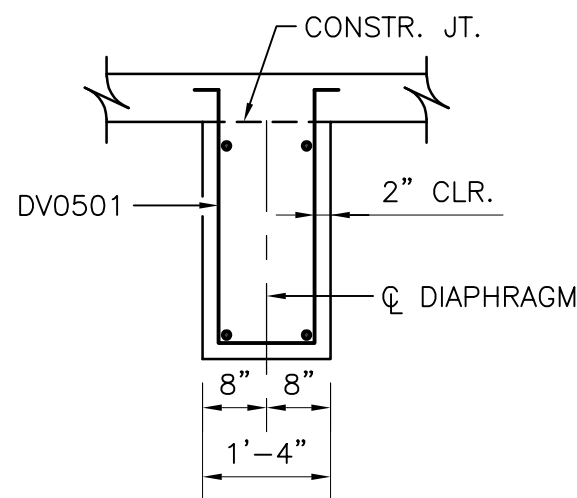
ERECTION DIAGRAM

SCALE: 1/8" = 1'-0"



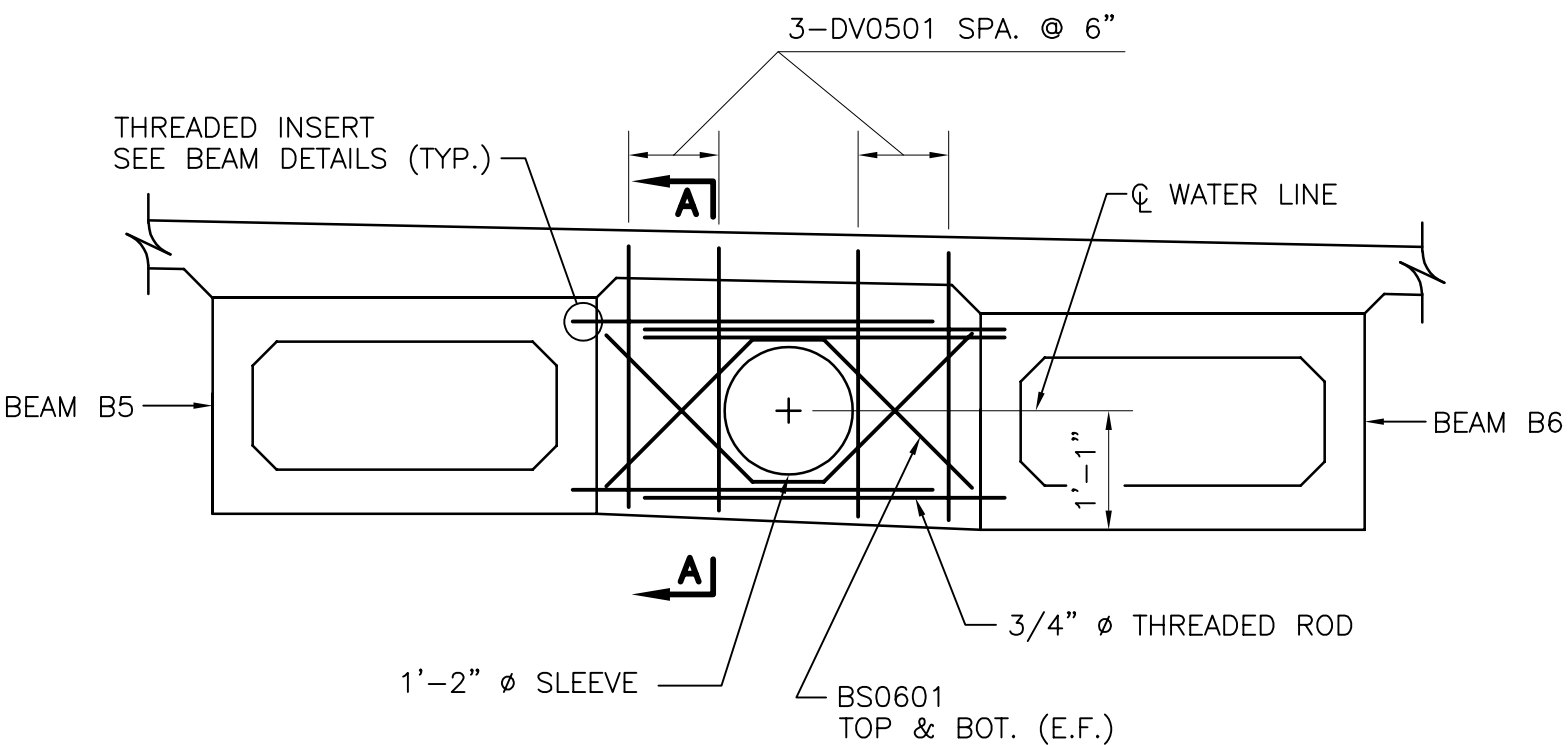
TYPICAL DIAPHRAGM ELEVATION

SCALE: 1/2" = 1'-0"



SECTION A-A

SCALE: 1/2" = 1'-0"



DIAPHRAGM ELEVATION AT WATER LINE

SCALE: 1/2" = 1'-0"

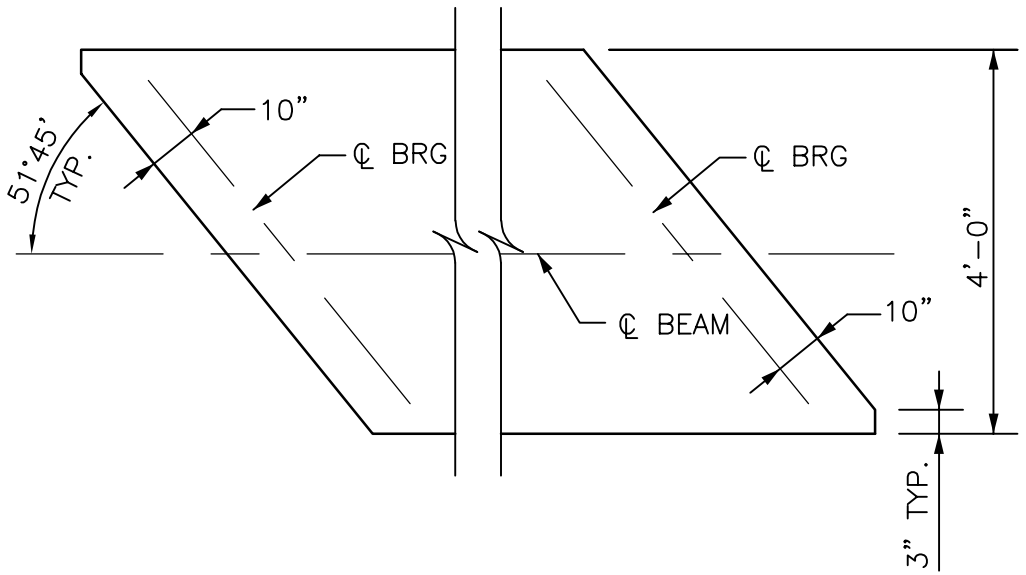
TOP OF SLAB ELEVATIONS ALONG ϕ BEAMS											
	ϕ BRG. ABUT. A 0.0L	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	ϕ BRG. ABUT. B 1.0L
BEAM B1	695.99	696.06	696.13	696.19	696.25	696.30	696.35	696.40	696.44	696.48	696.51
BEAM B2	696.27	696.34	696.40	696.45	696.50	696.55	696.60	696.63	696.67	696.70	696.73
BEAM B3	696.54	696.60	696.65	696.70	696.75	696.79	696.82	696.86	696.88	696.91	696.93
BEAM B4	696.80	696.85	696.90	696.94	696.98	697.01	697.04	697.07	697.09	697.10	697.12
BEAM B5	696.72	696.76	696.80	696.84	696.87	696.89	696.91	696.93	696.95	696.95	696.96
BEAM B6	696.62	696.66	696.69	696.72	696.74	696.76	696.77	696.79	696.79	696.79	696.79
BEAM B7	696.51	696.54	696.57	696.59	696.60	696.62	696.62	696.63	696.63	696.62	696.61

TOP OF SLAB ELEVATIONS ALONG ϕ BEAMS					
SIDEWALK BEAM	ϕ BRG. S/W ABUT. 0.0L	0.25L	0.5L	0.75L	ϕ BRG. BRIDGE ABUT. 1.0L
NW	695.77	695.98	696.18	696.38	696.58
NE	697.22	697.25	697.25	697.21	697.15
SW	696.77	696.88	696.98	697.06	697.12
SE	696.88	696.98	697.09	697.18	697.23

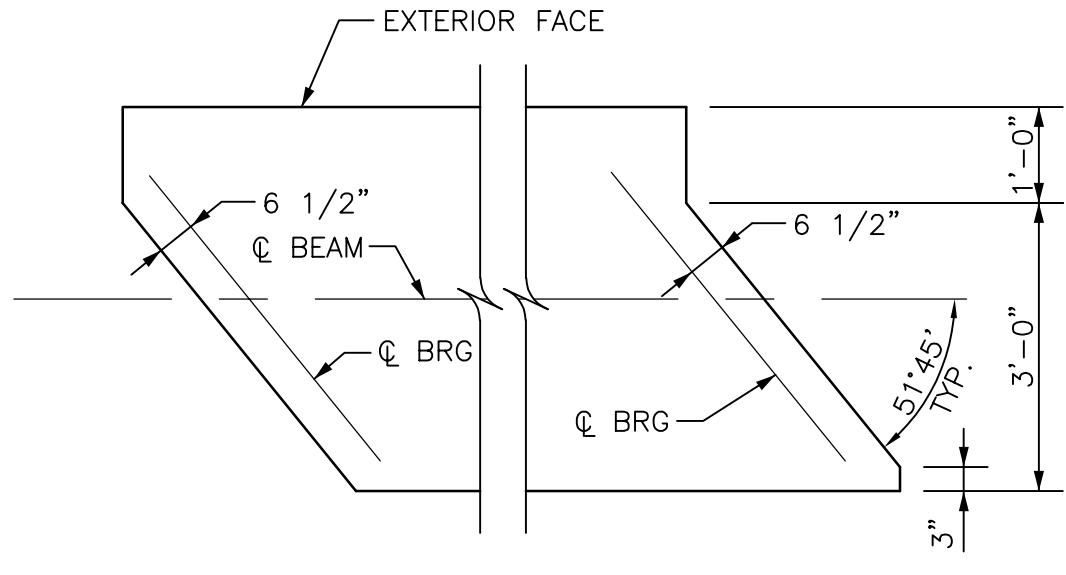
HSM
TRANSPORTATION
COMM. NO. 30089A

			THE CITY OF LYNCHBURG, VIRGINIA		
			DEPT. OF PUBLIC WORKS		
			ENGINEERING		
			BEDFORD AVE. BRIDGE OVER NS RWY		
			ERECTION DIAGRAM		
			DESIGNED BY: JAW	DRAWN BY: KSF	CHECKED BY: DRD
NO.	DESCRIPTION	DATE	SCALE: AS NOTED		PROJECT NO.: 03036-BR
REVISIONS			DATE: 14 JAN. 2005		SHEET: 6 OF 24

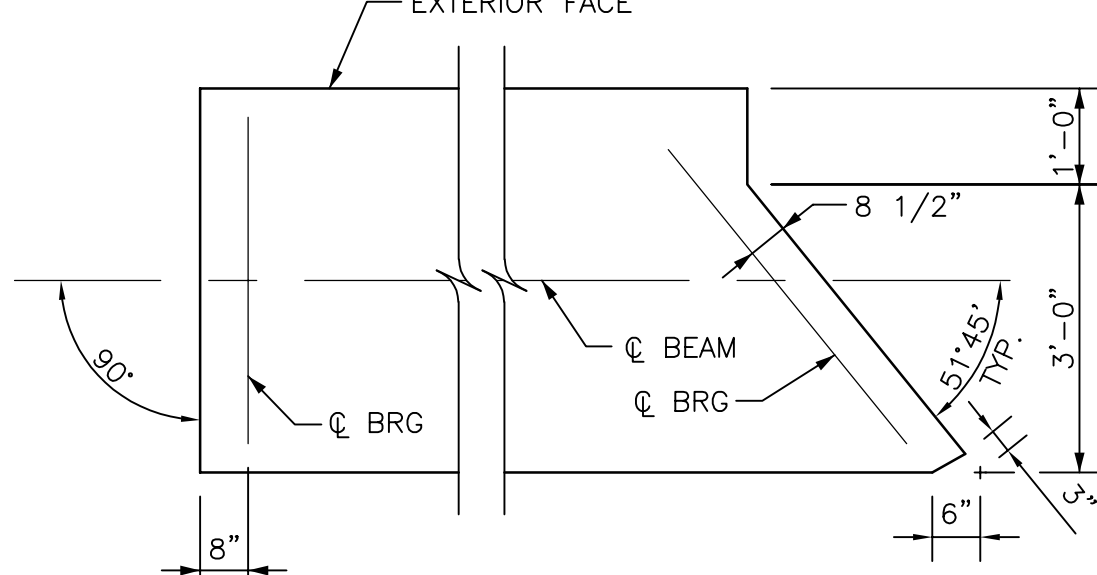
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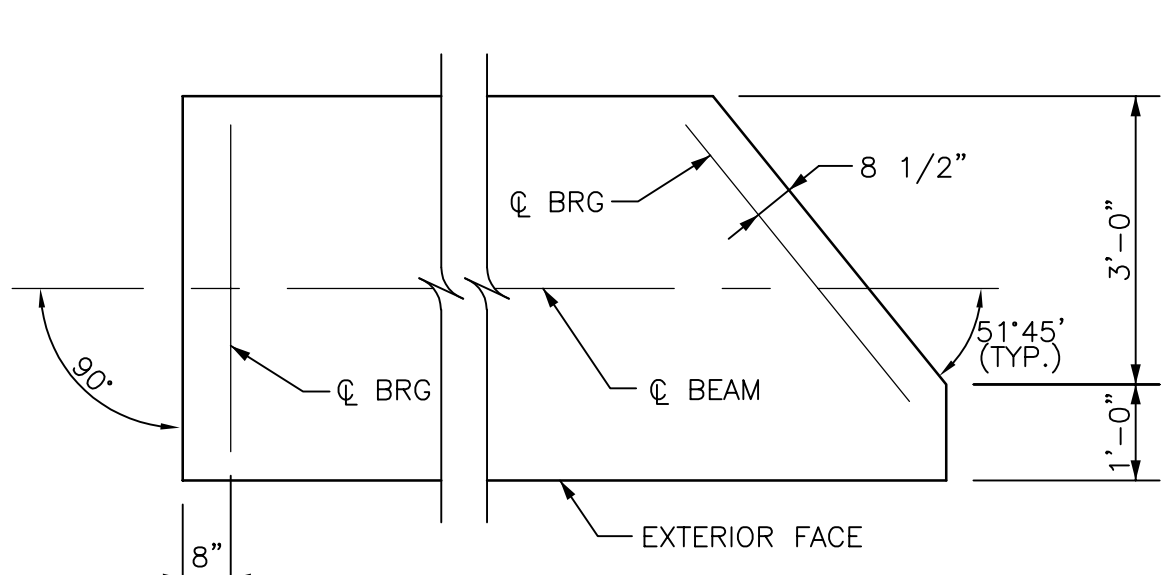
PLAN DETAIL-B2 TO B6
NOT TO SCALE



PLAN DETAIL-B1 AND B7
NOT TO SCALE



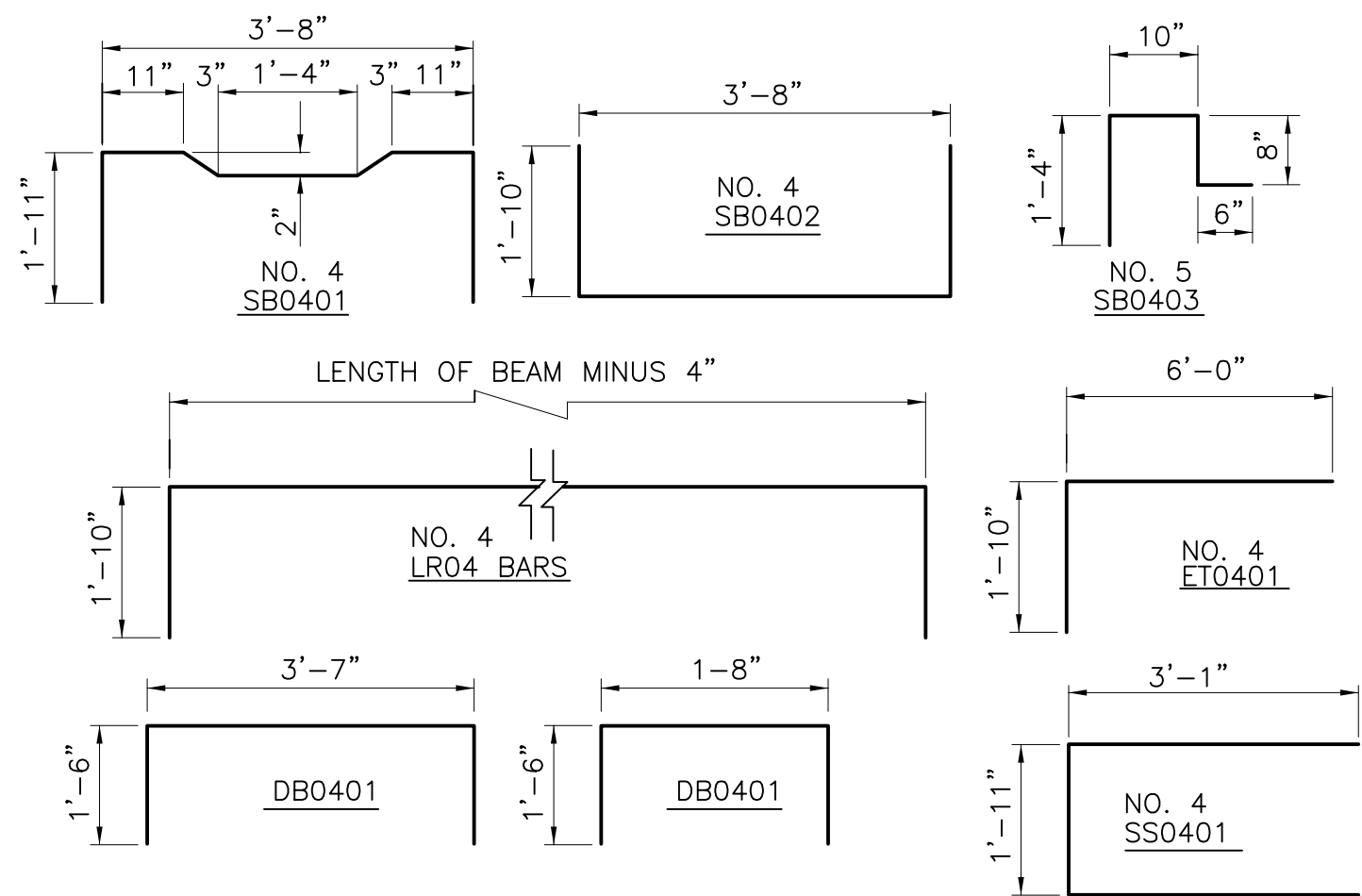
PLAN DETAIL-NW AND SE
NOT TO SCALE



PLAN DETAIL-NE AND SW
NOT TO SCALE

NOTES:

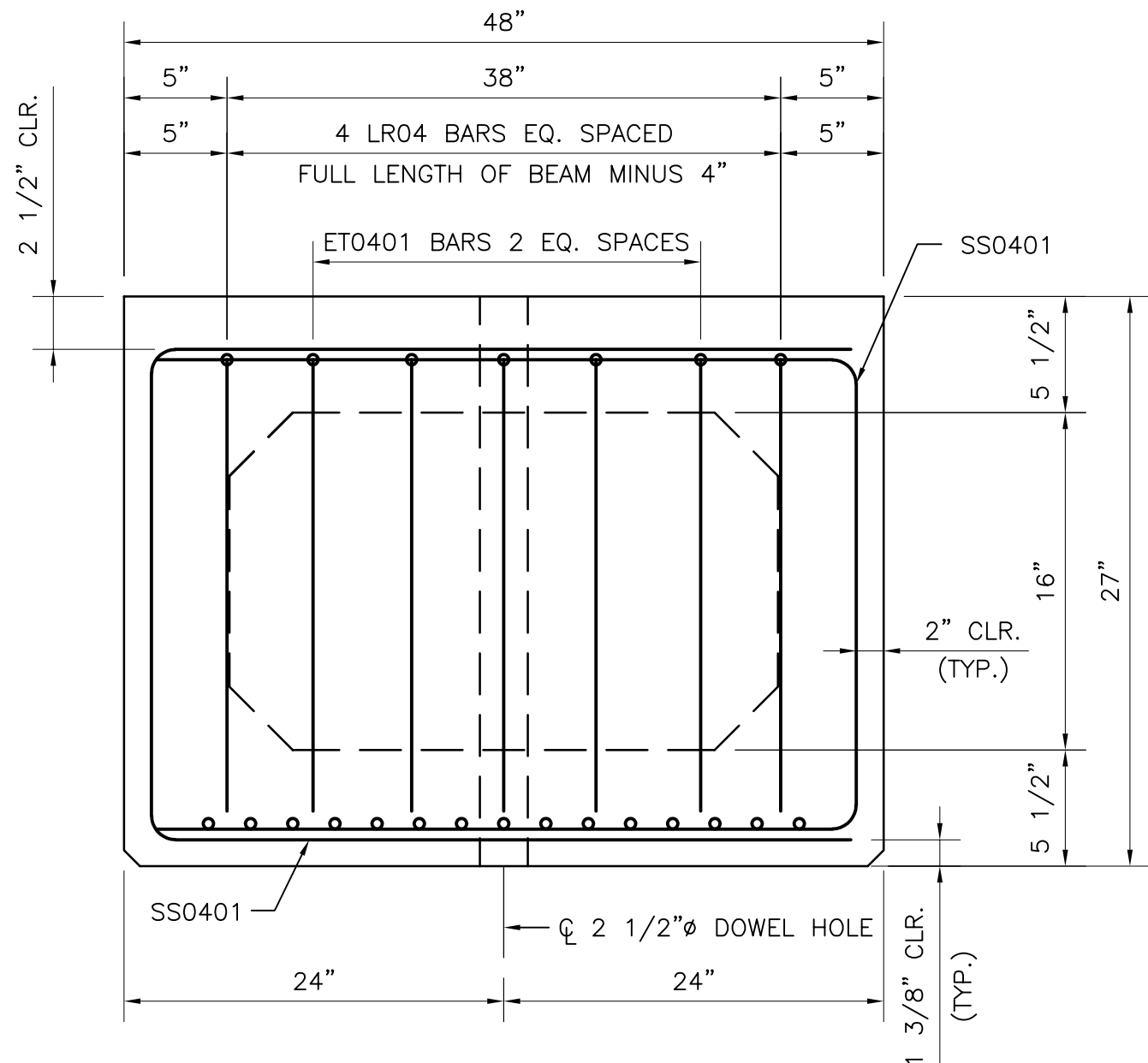
1. IN LIEU OF SPLICING REINFORCING BARS TO FORM EACH STIRRUP, THE STIRRUP MAY BE MADE FROM ONE SINGLE BAR.
2. ALL MILD REINFORCING STEEL IN THE BEAMS SHALL BE EPOXY COATED.
3. BEAM CORNERS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR SHAPE AS SHOWN ON THE PLANS BY AN APPROVED EPOXY MORTAR.
4. THE CONTRACTOR SHALL SUBMIT PRESTRESSING STRAND PATTERN AND BEAM DETAILS TO THE ENGINEER FOR APPROVAL.
5. THREADED INSERTS WHEN EMBEDDED AS SHOWN SHALL DEVELOP FULL STRENGTH OF 3/4" ϕ THREADED BOLT.
6. DUE TO CONSTRUCTION TOLERANCES, ADJUSTMENT TO THE BRIDGE SEAT ELEVATIONS MAY BE NEEDED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SUCH ADJUSTMENT AS DIRECTED BY THE ENGINEER TO INSURE THE FULL BEARING OF THE BEAM ON ALL THE PADS. COST OF ADJUSTMENT SHALL BE INCLUDED IN OTHER BID ITEMS.
7. ALL NON-PRESTRESSING REINFORCING BARS SHALL BE GRADE 60.
8. ALL STRANDS SHALL BE ENCLOSED INSIDE STIRRUP CAGE ENTIRE LENGTH OF BEAM.
9. ALL STRANDS SHALL BE 1/2" DIAMETER LOW RELAXATION STRANDS.
10. THREADED INSERTS SHALL NOT BE GALVANIZED OR COATED.
11. ADJUSTMENT OF DECK SLAB FORMS TO CORRECT FOR DEAD LOAD DEFLECTIONS SHALL BE MADE BY VARYING THICKNESS OF CONCRETE BOLSTER BETWEEN SLAB AND BEAM WITHOUT ALTERATION OF SLAB THICKNESS. LONGITUDINAL SCREED SHOULD BE SET ABOVE FINAL FINISHED GRADE BY AMOUNTS = Δ C2
12. THE 2 1/2" DIA. DOWEL HOLES AT SIDEWALK ABUTMENTS SHALL BE FILLED WITH GROUT. THE 2 1/2" DIA. DOWEL HOLES AT BRIDGE ABUTMENTS SHALL BE FILLED WITH JOINT SEALER MATERIAL TO 1 1/2" ABOVE TOP OF DOWELS AND THEN FILLED WITH GROUT.
13. CONCRETE STRENGTH AT RELEASE SHALL BE 3000 PSI MINIMUM.



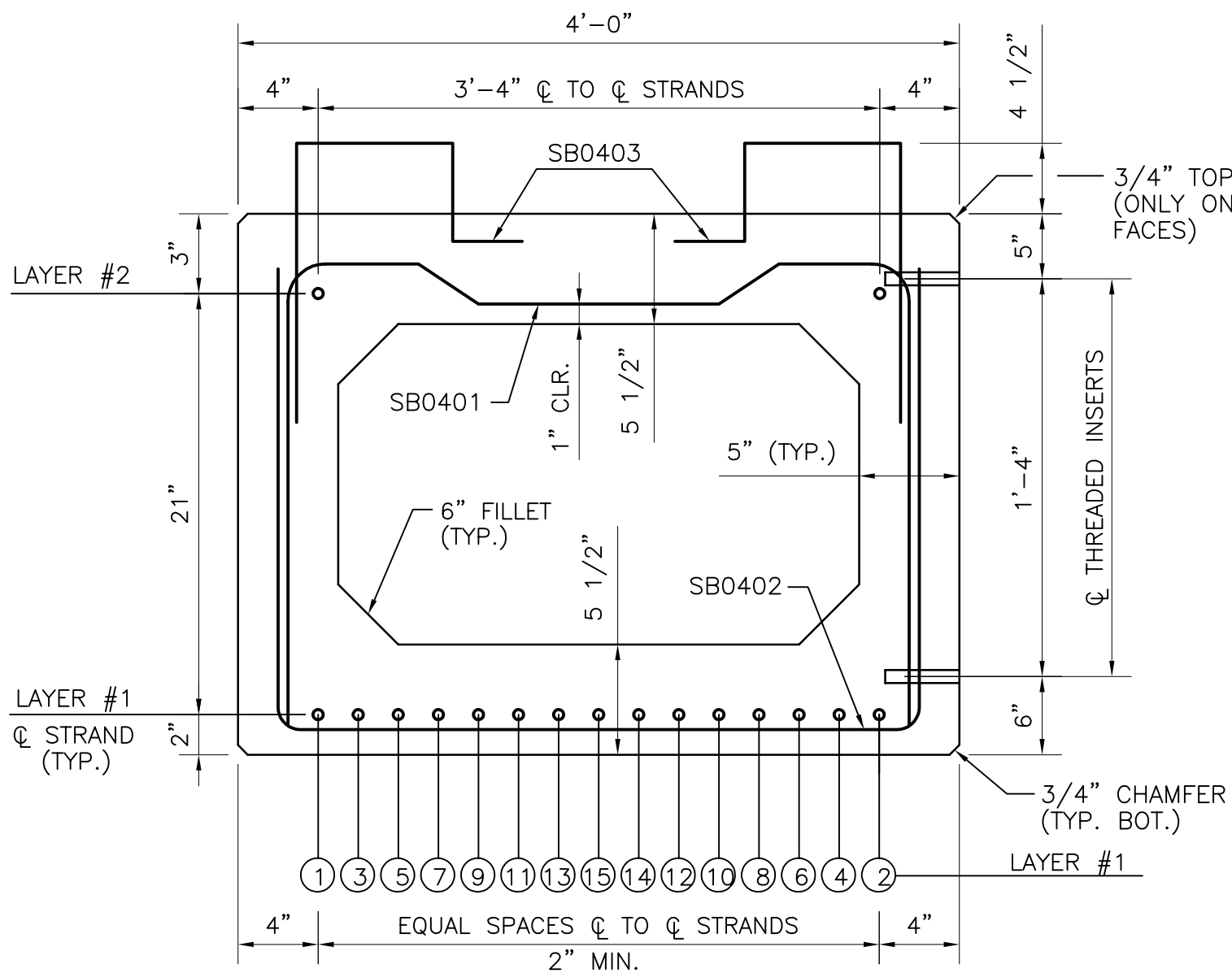
NOTES:

1. MINIMUM BAR BENDING DIAMETER SHALL BE 4 BAR DIAMETERS.
2. IF SPLICING OF BARS IS USED, TERMINATION OF LAP SPICE SHALL BE NO CLOSER TO THE END OF THE BEAM THAN 5 FEET. ADDITIONALLY ALL LAP SPLICES SHALL BE CONTACT TYPE.

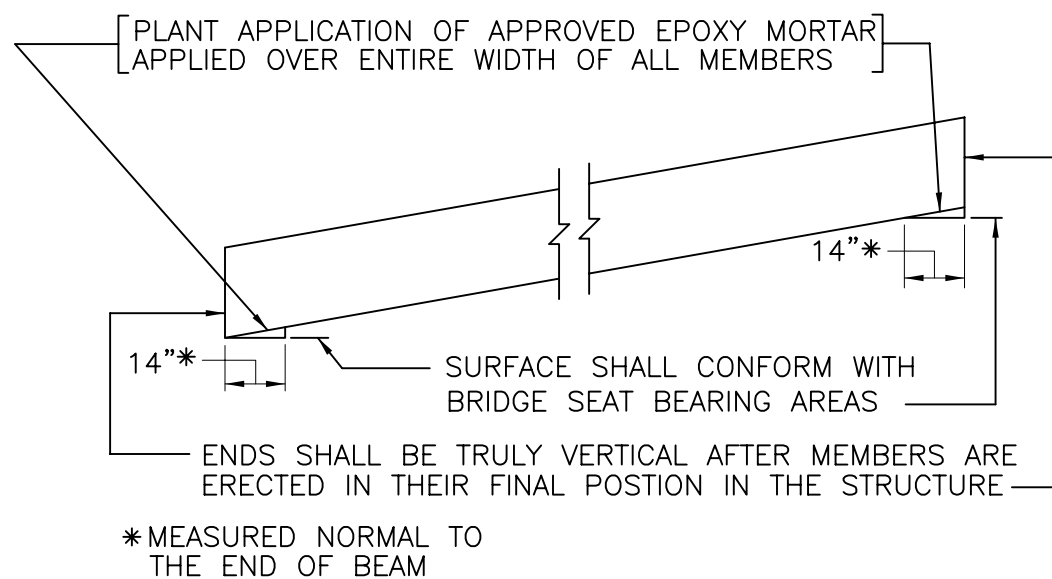
REINFORCING BAR DETAILS
NOT TO SCALE



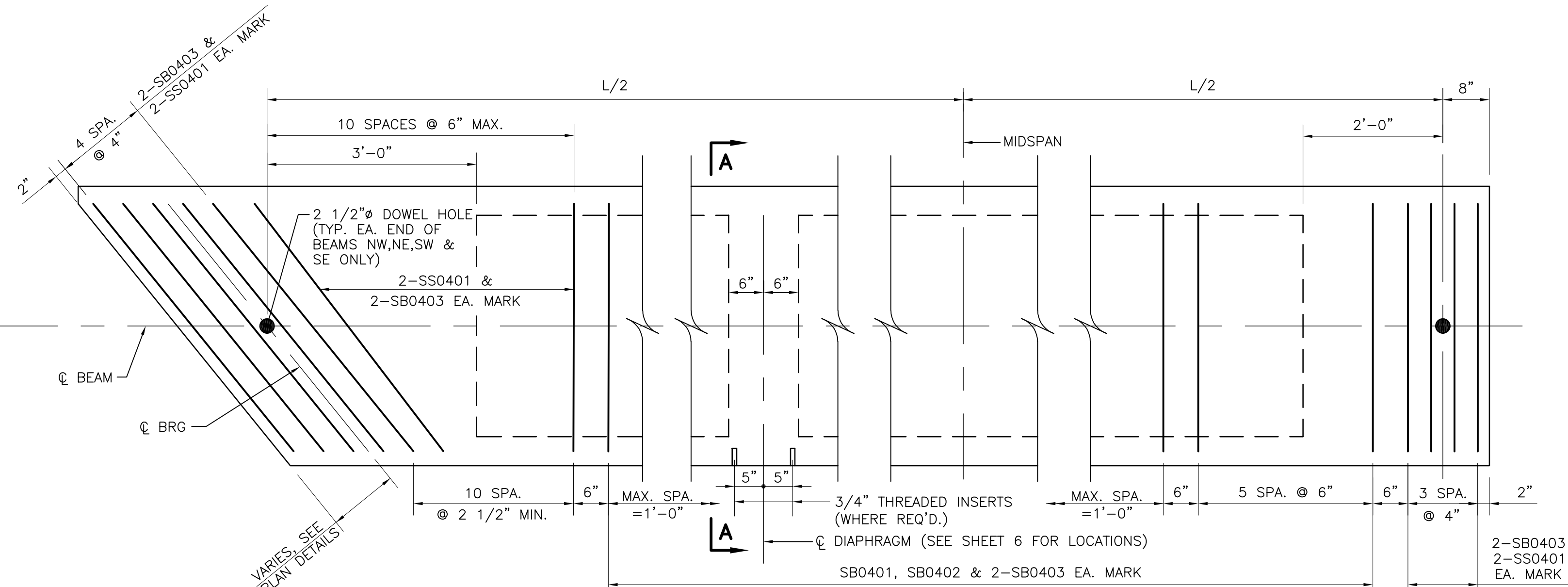
TYP BEAM END VIEW
NOT TO SCALE



TYP BEAM PRESTRESSING
NOT TO SCALE



**BEAMS ON GRADIENT
IN EXCESS OF 1%**
NOT TO SCALE

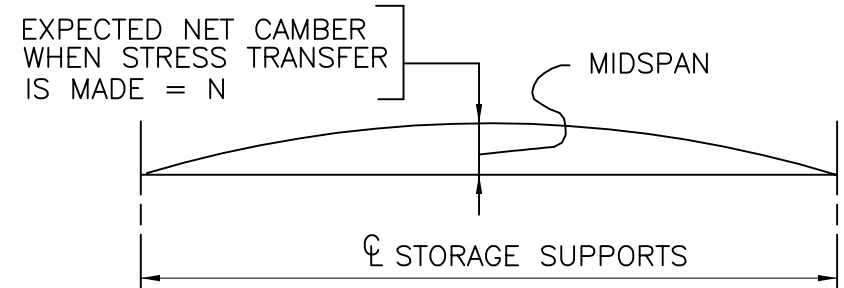


TYPICAL SKEW END
B2 TO B6 SHOWN
OTHERS SIMILAR

TYPICAL BEAM PLAN

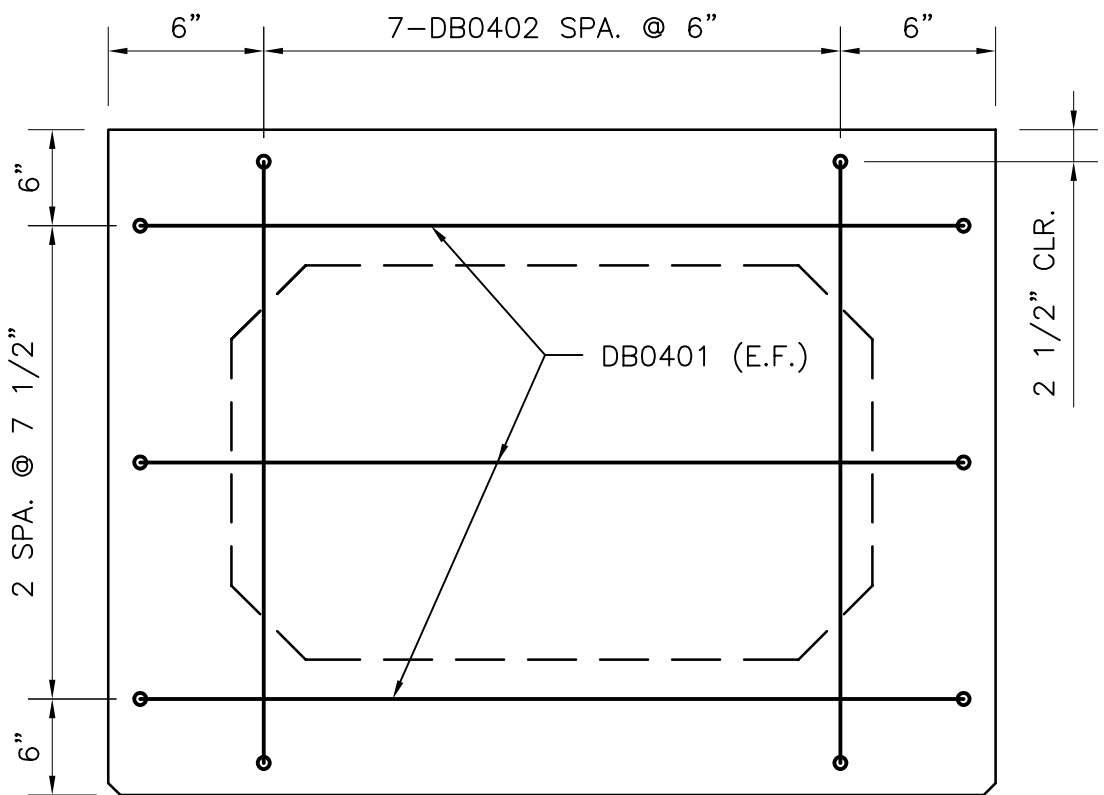
SCALE: 3/4" = 1'-0"

TYPICAL SQUARE END



CAMBER DIAGRAM

NOT TO SCALE



SECTION A-A

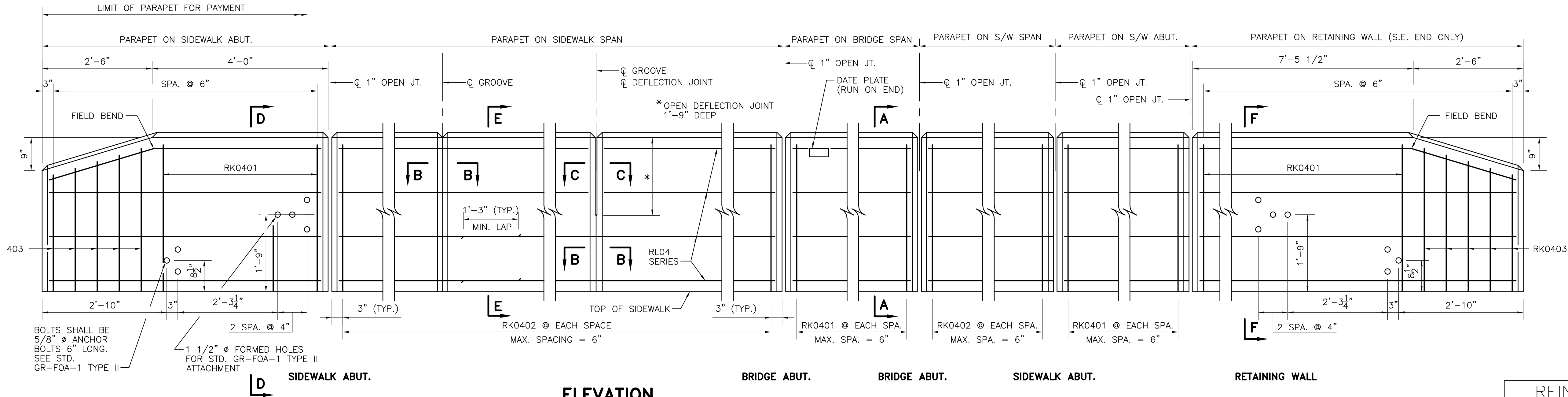
NOT TO SCALE

PRESTRESSING STEEL DATA TABLE									
BEAM	SPAN LENGTH L (FT)	NO. OF STRANDS		PRESTRESSING FORCE PER STRAND-LBS.	NET CAMBER N IN.	GRADE %	Δ C1		Δ C2
		LAYER 1	LAYER 2				IN.	IN.	
B1	37'-8"	14	2	30,980	5/16	+ 1.4	1/8	0	
B2	37'-8"	14	2	30,980	5/16	+ 1.2	1/8	0	
B3	37'-8"	14	2	30,980	5/16	+ 1.0	1/8	0	
B4	37'-8"	14	2	30,980	5/16	+ 0.8	1/8	0	
B5	37'-8"	14	2	30,980	5/16	+ 0.6	1/8	0	
B6	37'-8"	14	2	30,980	5/16	+ 0.4	1/8	0	
B7	37'-8"	14	2	30,980	5/16	+ 0.3	1/8	0	
NW	40'-2	3/4"	15	2	30,980	5/16	+ 2.0	1/8	1/16
NE	40'-2	3/4"	15	2	30,980	5/16	+ 0.2	1/8	1/16
SW	27'-3	3/4"	15	2	30,980	1/4	+ 1.3	0	0
SE	41'-11	3/4"	15	2	30,980	5/16	- 0.8	1/8	1/16

Δ C1 = DEFLECTION OF BEAM FROM DEAD LOAD OF CONCRETE DECK SLAB, BOLSTERS AND DIAPHRAGMS AND DOES NOT INCLUDE THE DEFLECTION OF THE BEAM FROM ITS OWN WEIGHT.

Δ C2 = DEFLECTION OF COMPOSITE SECTION FROM DEAD LOAD (E.G. PARAPET AND SIDEWALK ADDED AFTER DECK SLAB IS CAST).

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- NOTES:
- ALL BEVELS FOR CONCRETE ON THIS SHEET SHALL BE 3/4".
 - ALL OF THE INDICATED CONSTRUCTION JOINTS ARE PERMISSIBLE, SELECTED TO FACILITATE CONSTRUCTION AND MAY BE OMITTED AT THE CONTRACTOR'S OPTION.
 - REINFORCING BARS RK0401 AND RK0402 SHALL BE GALVANIZED. ALL OTHER REINFORCING STEEL SHALL BE EPOXY COATED.
 - SPACING OF GROOVES TO BE APPROXIMATELY 8'-0". SPACING OF DEFLECTION JOINTS SHALL NOT EXCEED THREE GROOVE SPACES.
 - THE CONTRACTOR SHALL DETERMINE ALL DIMENSIONS AND DETAILS NECESSARY FOR INSTALLATION.
 - CONCRETE IN PARAPET, INCLUDING SIDEWALK, SHALL BE CLASS A4.
 - ROUNDED EDGES WITH 1" RADIUS MAY BE USED IN LIEU OF BEVELS ALONG TO OF PARAPET.
 - TERMINAL WALLS ARE DETAILED TO TAKE GUARDRAIL ATTACHMENT STD. GR-FOA-1 TYPE II.
 - HOLES, WHERE SHOWN, SHALL BE FORMED WITH SLEEVES OF 1 1/2" Ø NOMINAL PVC PIPE AND SHALL REMAIN IN PLACE.
 - BOLTS, WHERE SHOWN, SHALL BE 5/8" Ø EXPANSION ANCHOR BOLTS, 6" LONG TO BE DRILLED AND INSTALLED WHEN RUB RAIL IS ATTACHED.

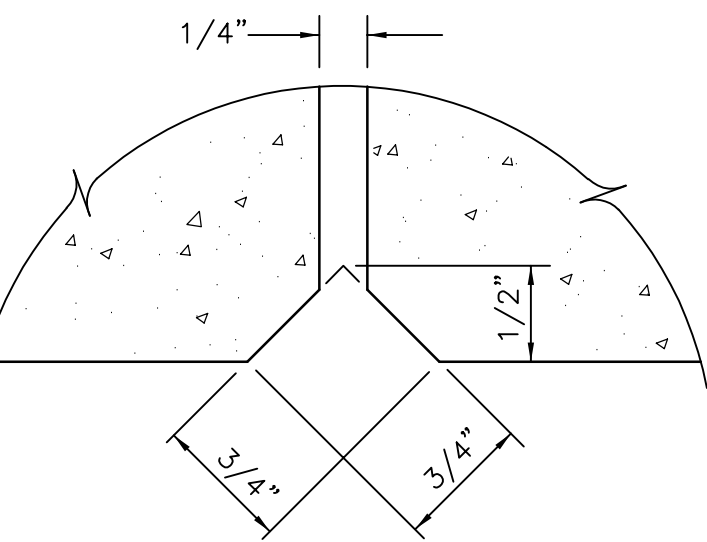
ELEVATION

SCALE: 1" = 1'-0"

SECTION B-B

FULL SCALE

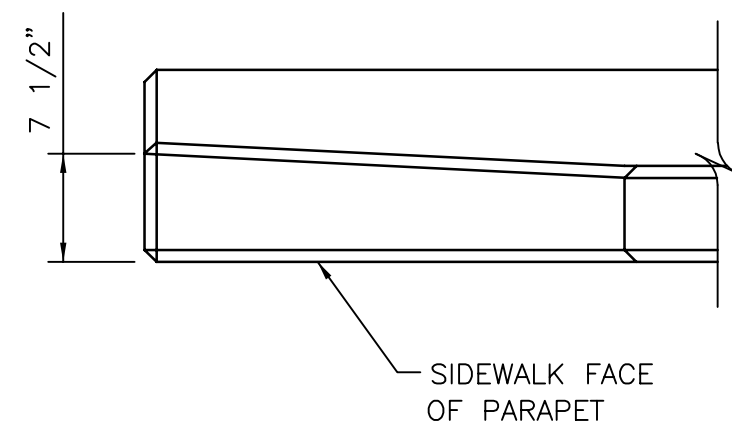
GROOVE DETAIL FOR BOTH SIDES OF PARAPET



SECTION C-C

FULL SCALE

DEFLECTION JOINT DETAIL FOR BOTH SIDES OF PARAPET



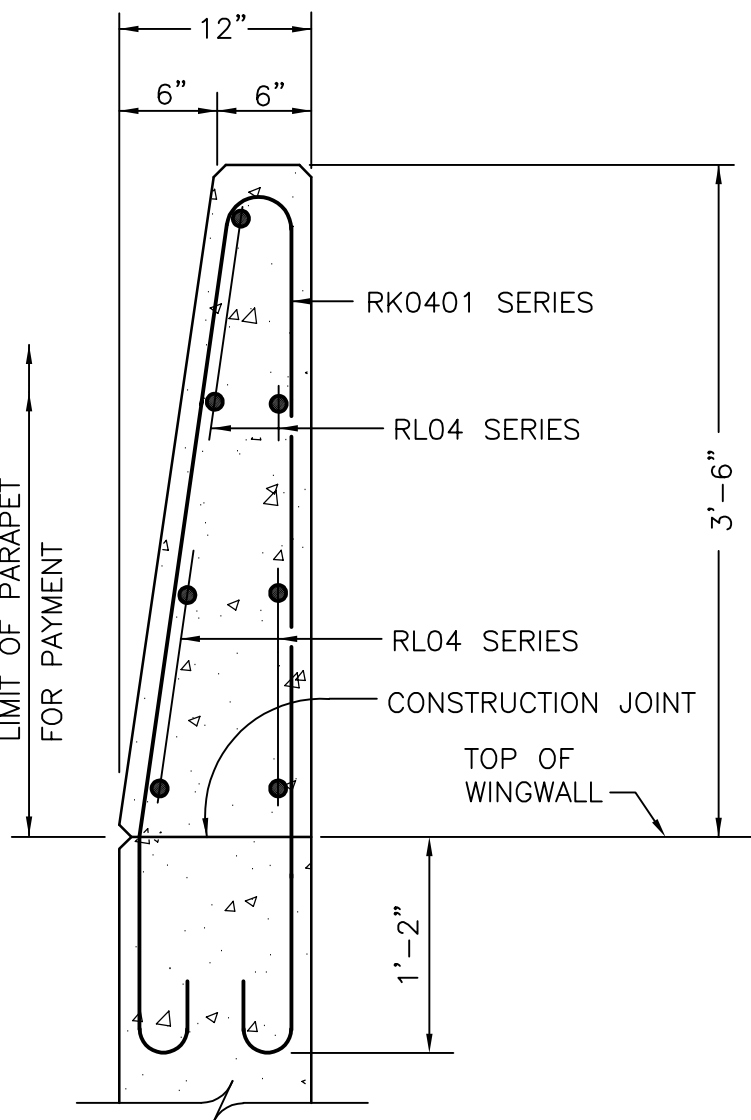
SECTION A-A

SCALE: 1" = 1'-0"

GROSS CONCRETE QUANTITIES (C.Y.) = LIN. FT. X 0.097
ALL CONCRETE ABOVE SIDEWALK

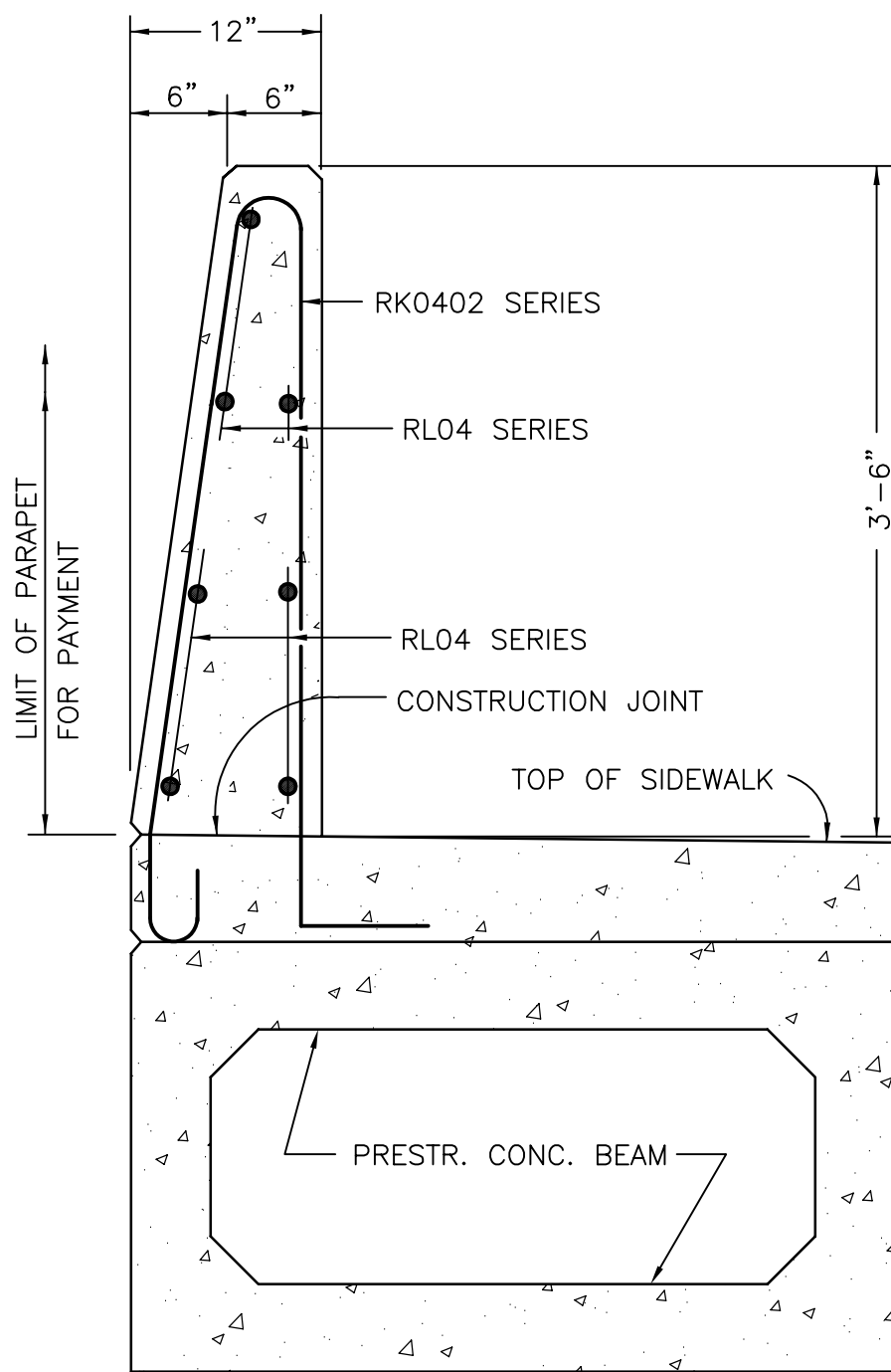
SECTION D-D

SCALE: 1" = 1'-0"



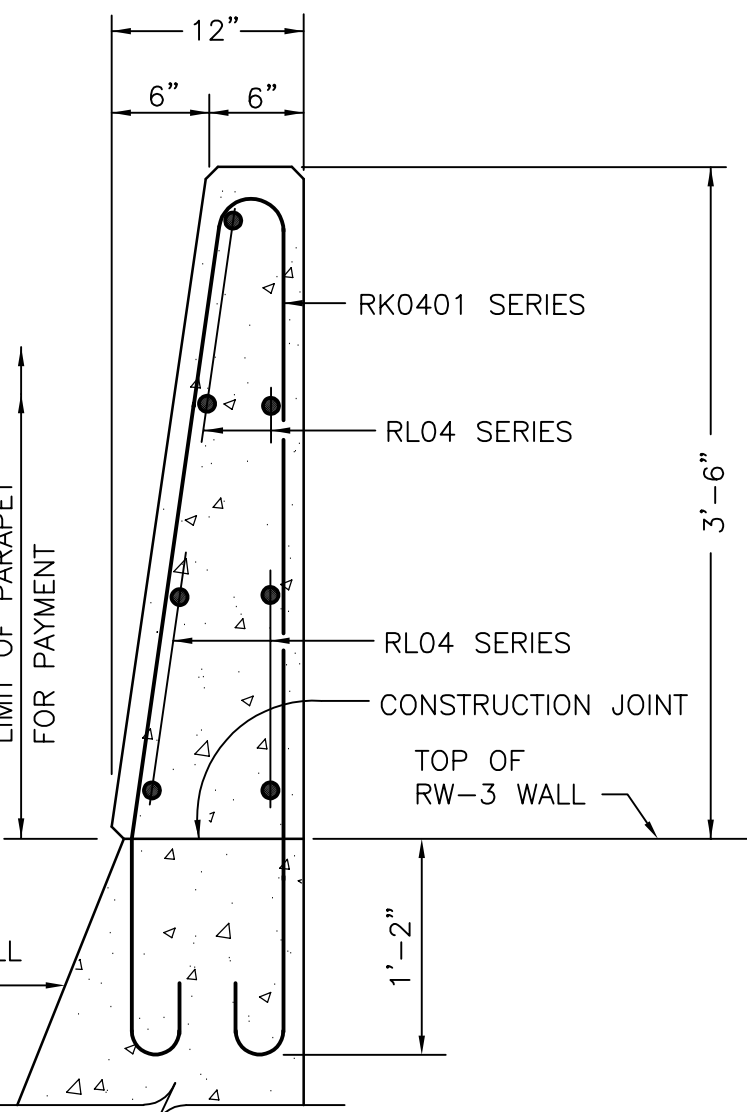
SECTION E-E

SCALE: 1" = 1'-0"

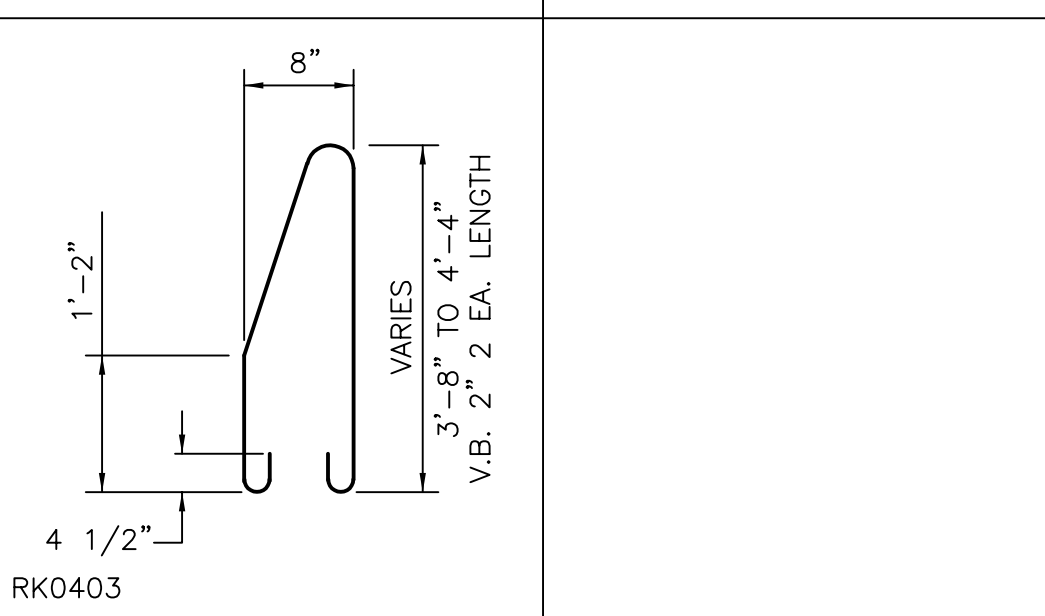
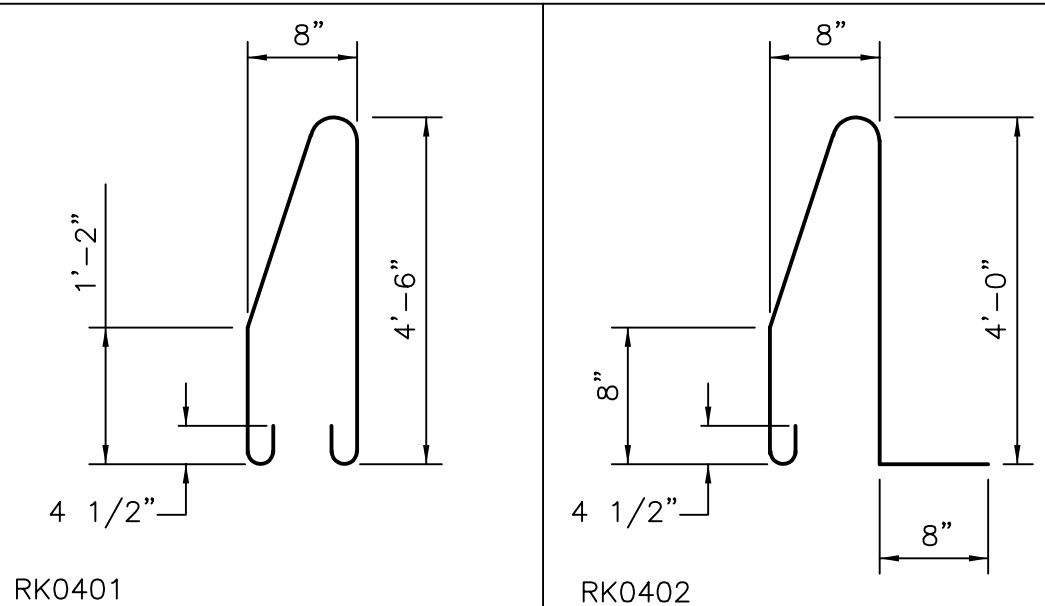


SECTION F-F

SCALE: 1" = 1'-0"



REINFORCING STEEL SCHEDULE



DIMENSIONS IN BENDING DIAGRAM ARE OUT TO OUT OF BARS, EXCEPT AS SHOWN.

MARK	SIZE	LENGTH	PIN Ø	LOCATION
RK0401	#4		2 1/2"	PARAPET
RL04	#4			PARAPET
RK0402	#4		2 1/2"	PARAPET
RK0403	#4		2 1/2"	PARAPET

HSMW

TRANSPORTATION

COMM. NO. 30089A

PART PLAN AT TERMINAL WALLS

SCALE: 1" = 1'-0"

THE CITY OF LYNCHBURG, VIRGINIA

 **DEPT. OF PUBLIC WORKS**

ENGINEERING

BEDFORD AVE. BRIDGE OVER NS RWY

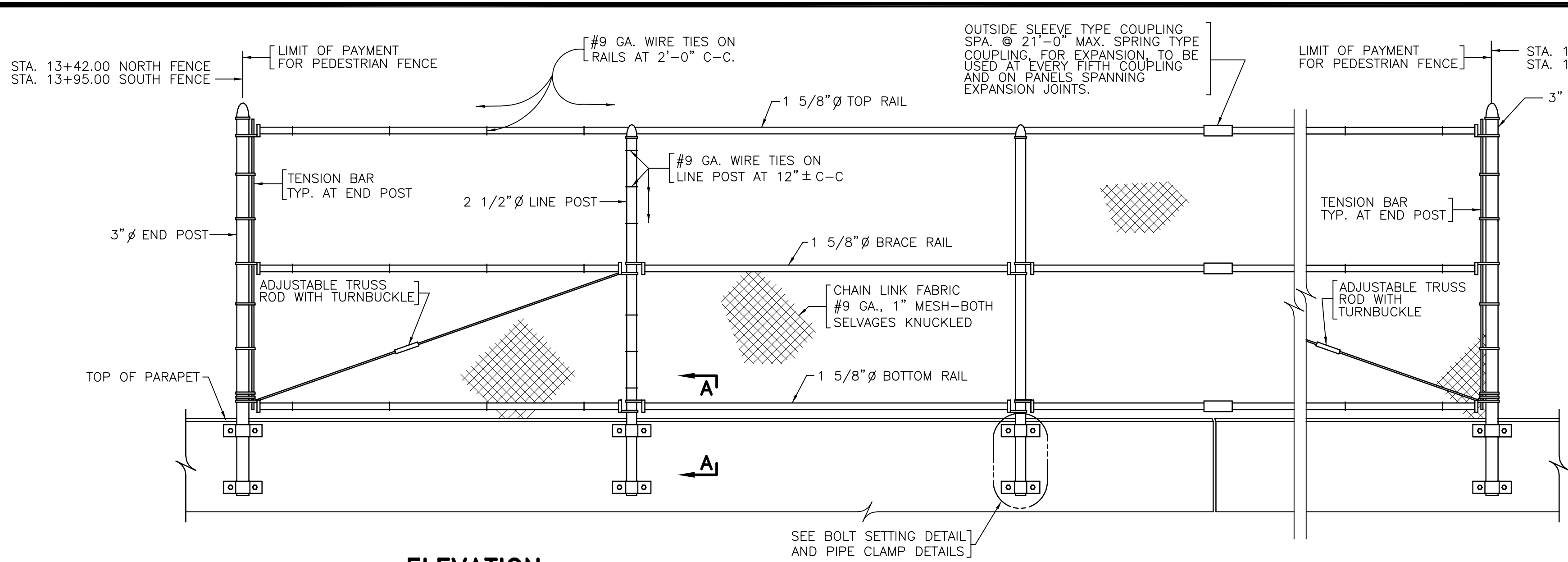
CAST-IN-PLACE CONCRETE PARAPET WITH SIDEWALK

DESIGNED BY: DRD DRAWN BY: KSF CHECKED BY: DRD

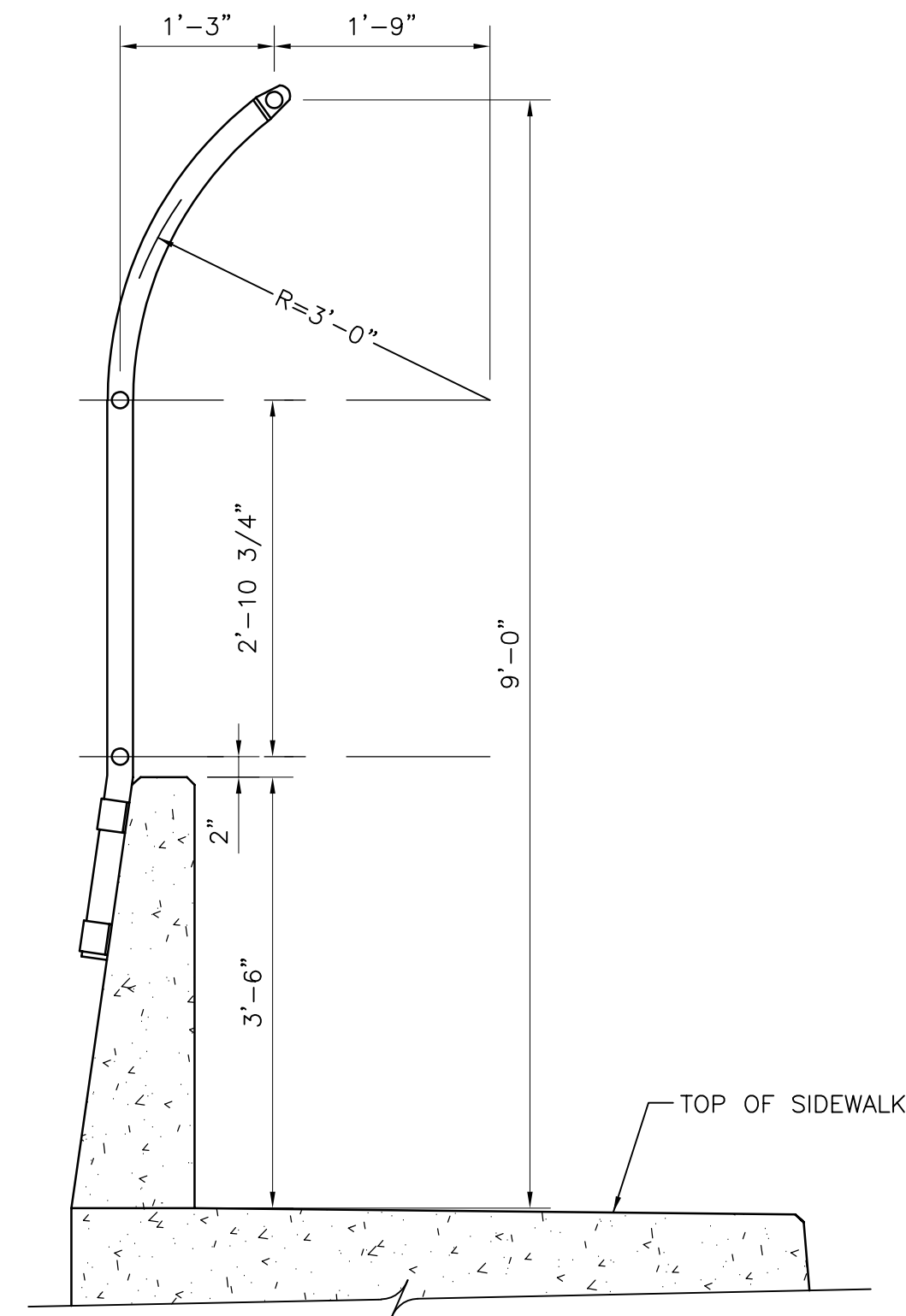
NO. DESCRIPTION DATE SCALE: AS NOTED PROJECT NO.: 03036-BR

REVISIONS DATE: 14 JAN. 2005 SHEET: 8 OF 24

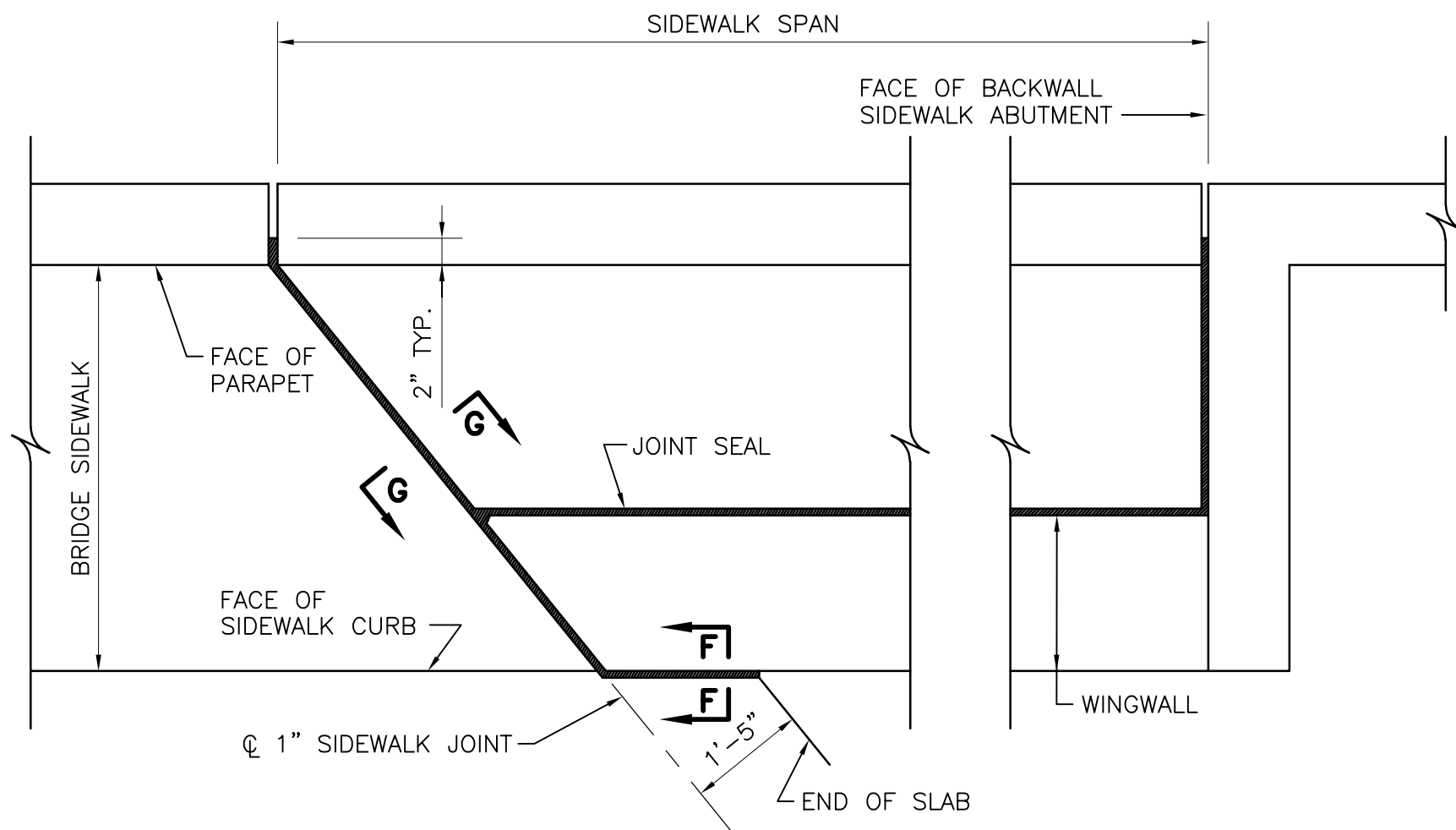
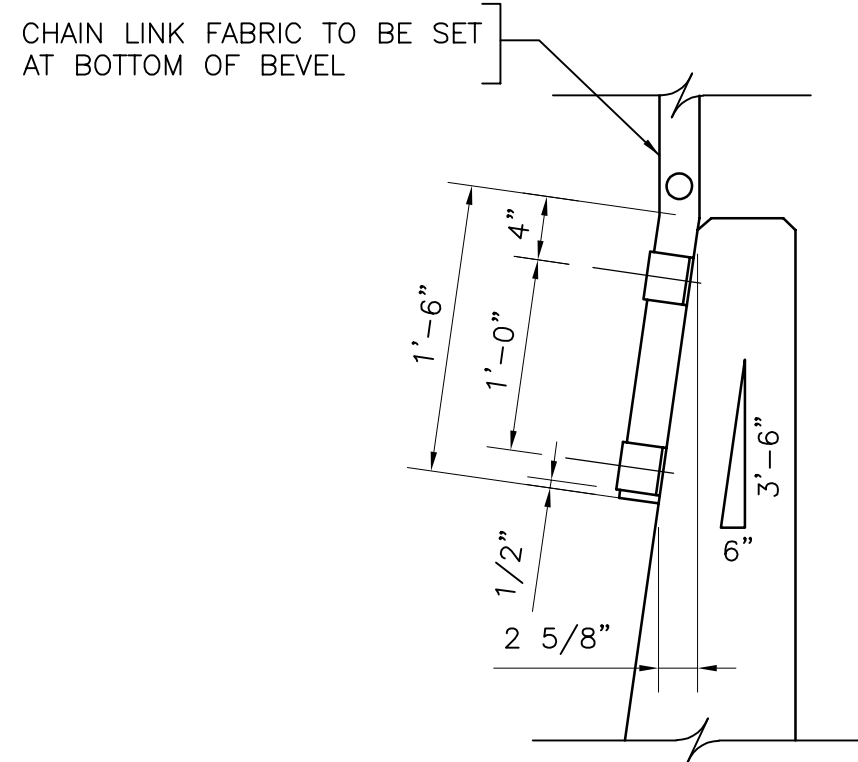
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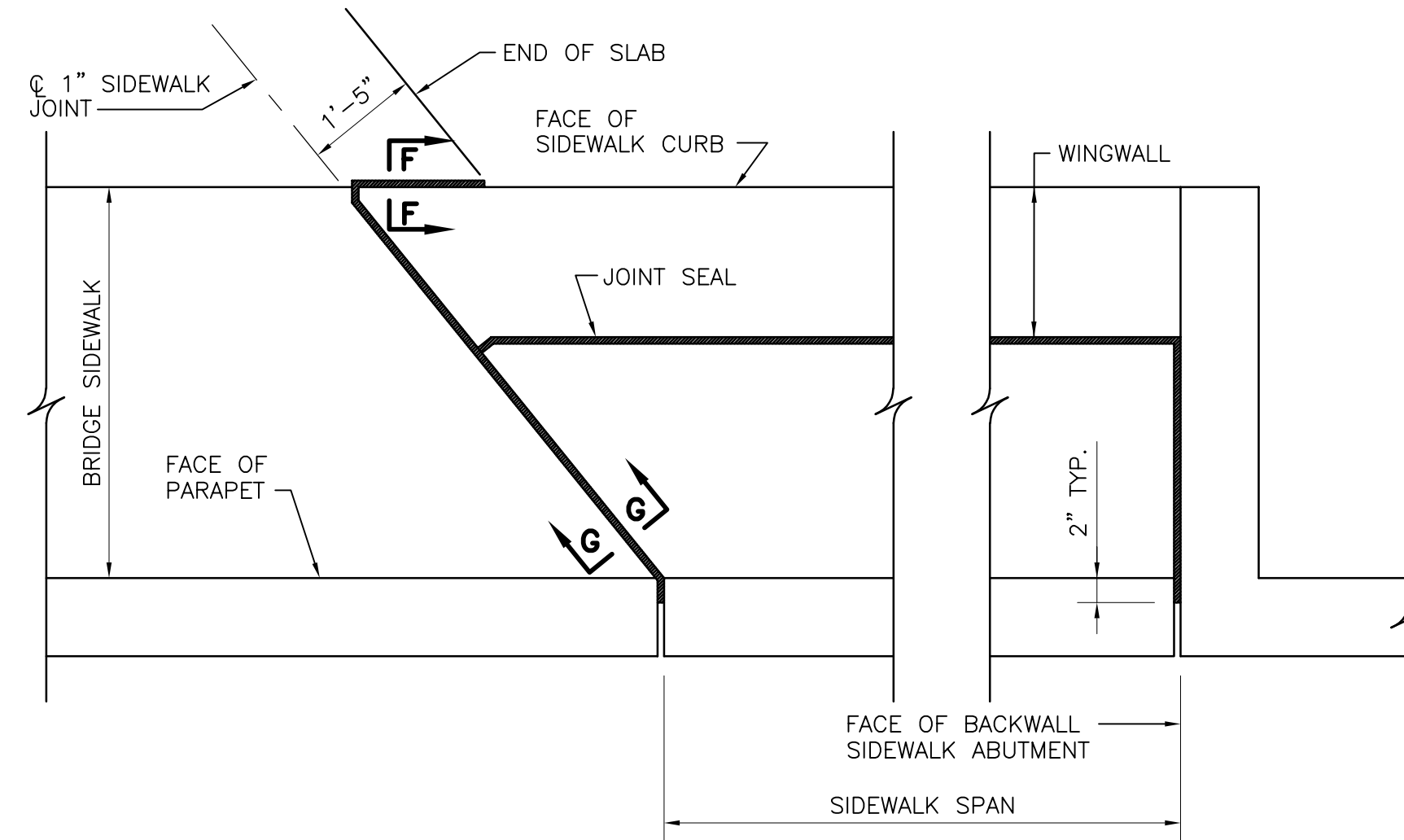
ELEVATION
NOT TO SCALE



SECTION A-A
SCALE: 1" = 1'-0"



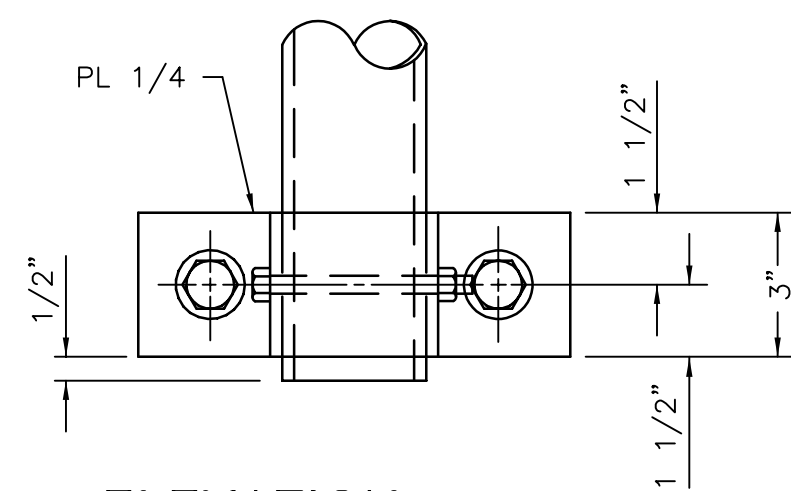
JOINT SEAL PLAN - N.E. AND S.W. SIDEWALK
NO SCALE



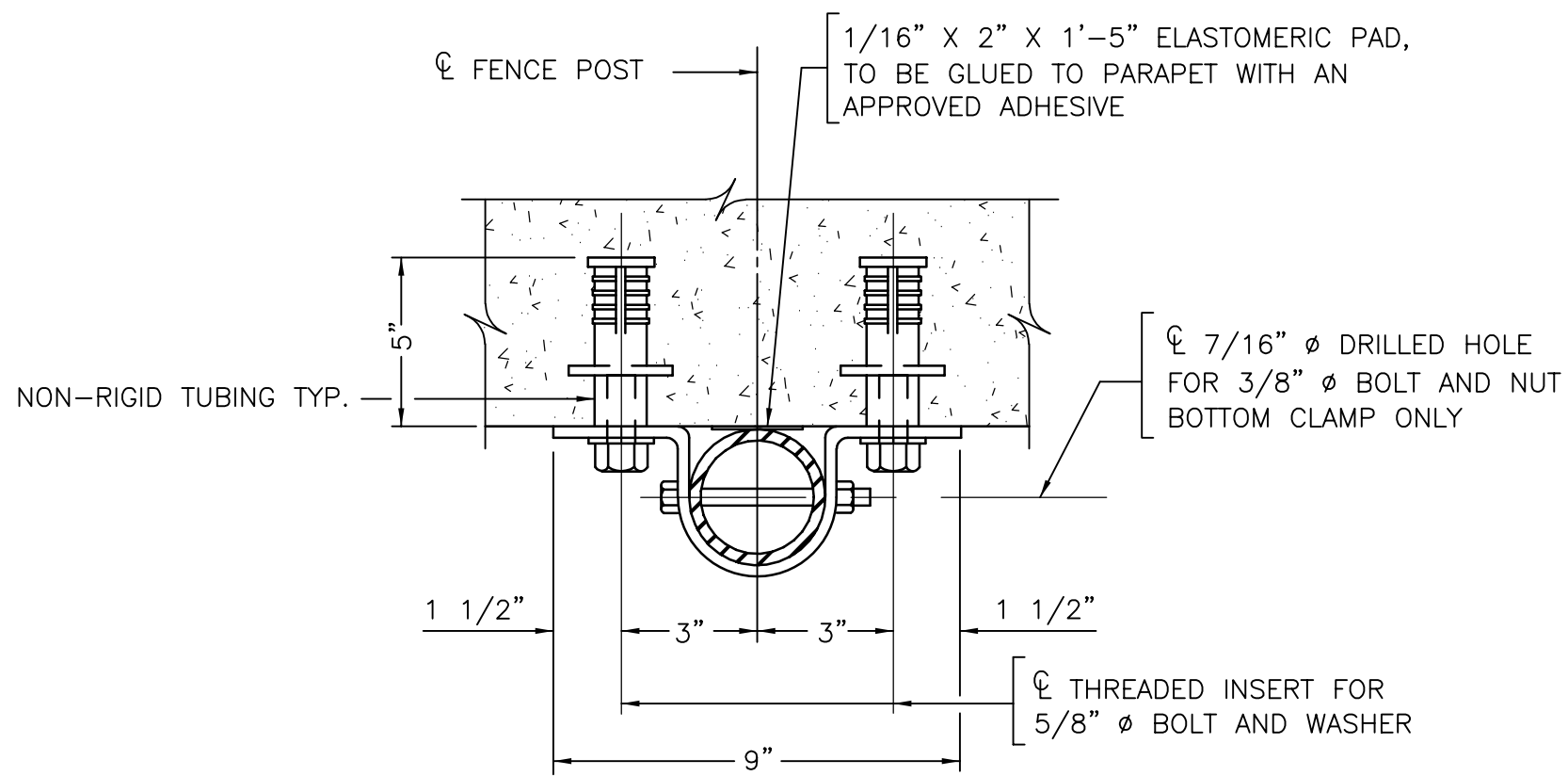
JOINT SEAL PLAN - S.E. AND N.W. SIDEWALK
NO SCALE

SECTION FOR PARAPET WITH SIDEWALK

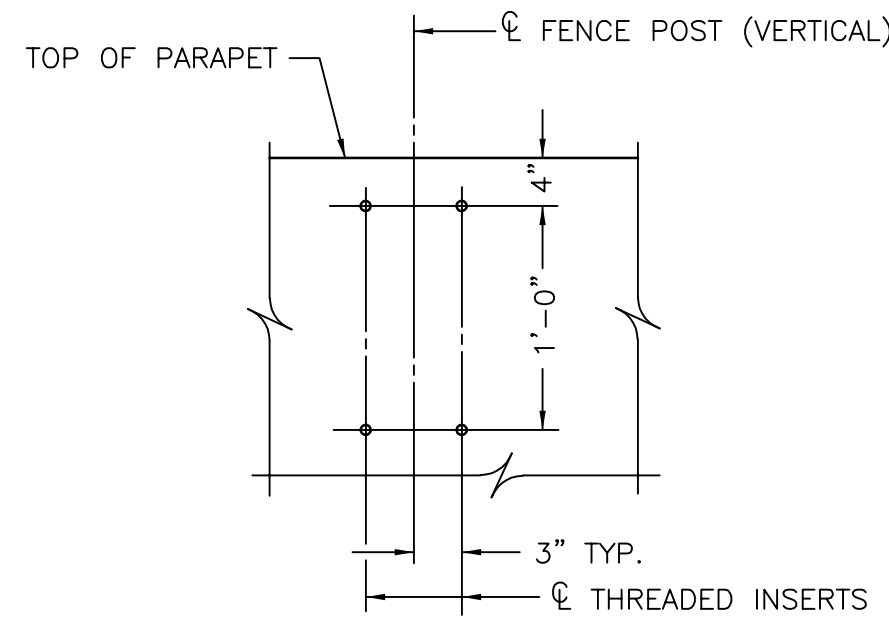
SCALE: 3/4" = 1'-0"



**ELEVATION
PIPE CLAMP DETAILS**
SCALE: 3" = 1'-0"



**PLAN
PIPE CLAMP DETAILS**
SCALE: 3" = 1'-0"



BOLT SETTING DETAIL
SCALE: 1" = 1'-0"

FENCE NOTES:

POSTS SHALL BE SET VERTICAL. RAILS SHALL BE SET PARALLEL TO THE TOP OF PARAPET.

LINE POST SHALL BE LOCATED APPROXIMATELY MIDWAY BETWEEN PARAPET GROOVES AND DEFLECTION JOINTS. MAXIMUM SPACING OF POSTS SHALL NOT EXCEED 10'-0".

CHAIN LINK FABRIC SHALL BE PLACED ON INSIDE OF POSTS AND RAILS.

CHAIN LINK FABRIC, POSTS, RAILS, AND OTHER ASSOCIATED HARDWARE SHALL BE COLOR GREEN (SIMILAR TO 595-24227) AND VINYL COATED STEEL.

THREADED INSERTS AND BOLT THREADS SHALL NOT BE GALVANIZED OR COATED.

ENDS OF WIRE TIES SHALL BE TURNED TO OUTSIDE OF FENCE TO PREVENT INJURY TO PEDESTRIANS.

ADJUSTABLE TRUSS ROD WITH TRUNBUCKLE SHALL BE INSTALLED BETWEEN LINE POST AND BSE OF END POST.

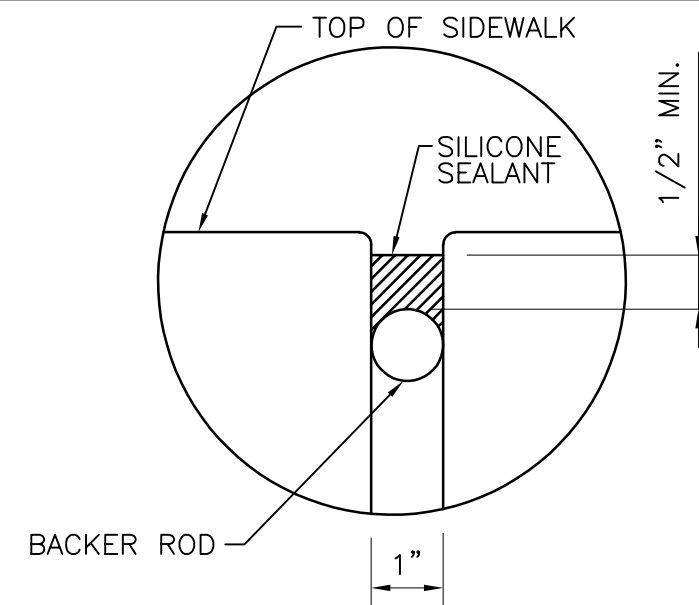
THREADED INSERTS, WHEN EMBEDDED AS SHOWN, SHALL DEVELOP FULL STRENGTH OF THREADED BOLTS.

ALL BOLTS SHALL BE HIGH STRENGTH (ASTM A325)

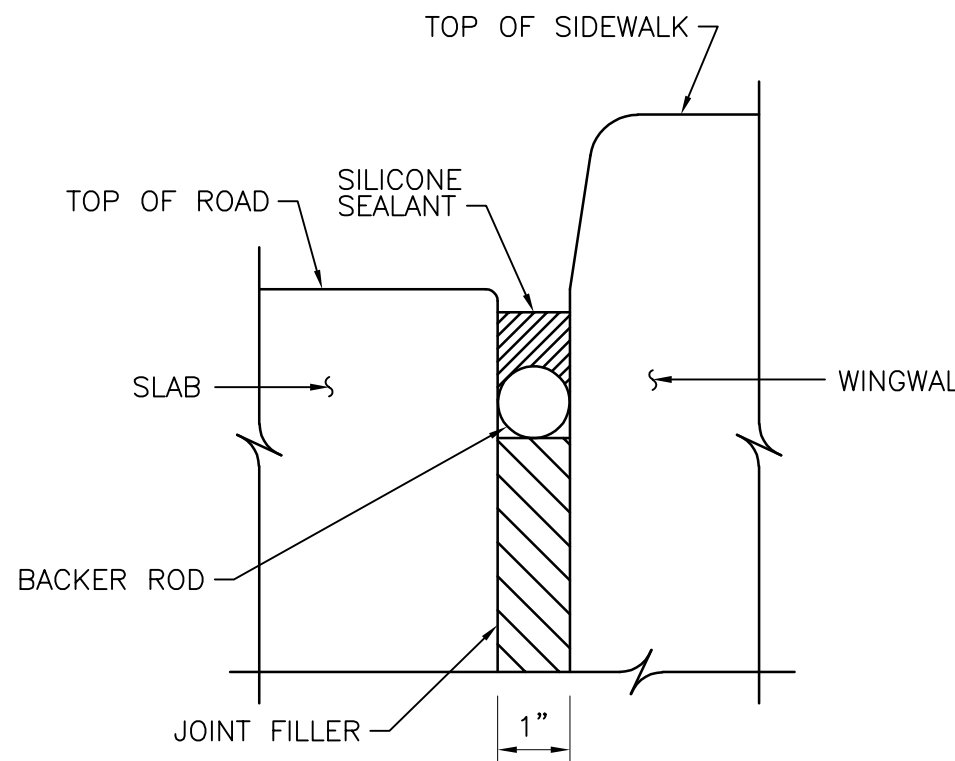
JOINT SEAL NOTES:

INSTALLATION OF JOINT SEAL SHALL BE IN ACCORDANCE WITH THE MANUFACTURE'S INSTRUCTIONS, A COPY OF WHICH SHALL BE SUBMITTED TO THE ENGINEER.

THE COST OF FURNISHING AND INSTALLING THE JOINT SEALS SHALL BE INCLUDED IN THE PRICE BID FOR CONCRETE, CLASS A4.

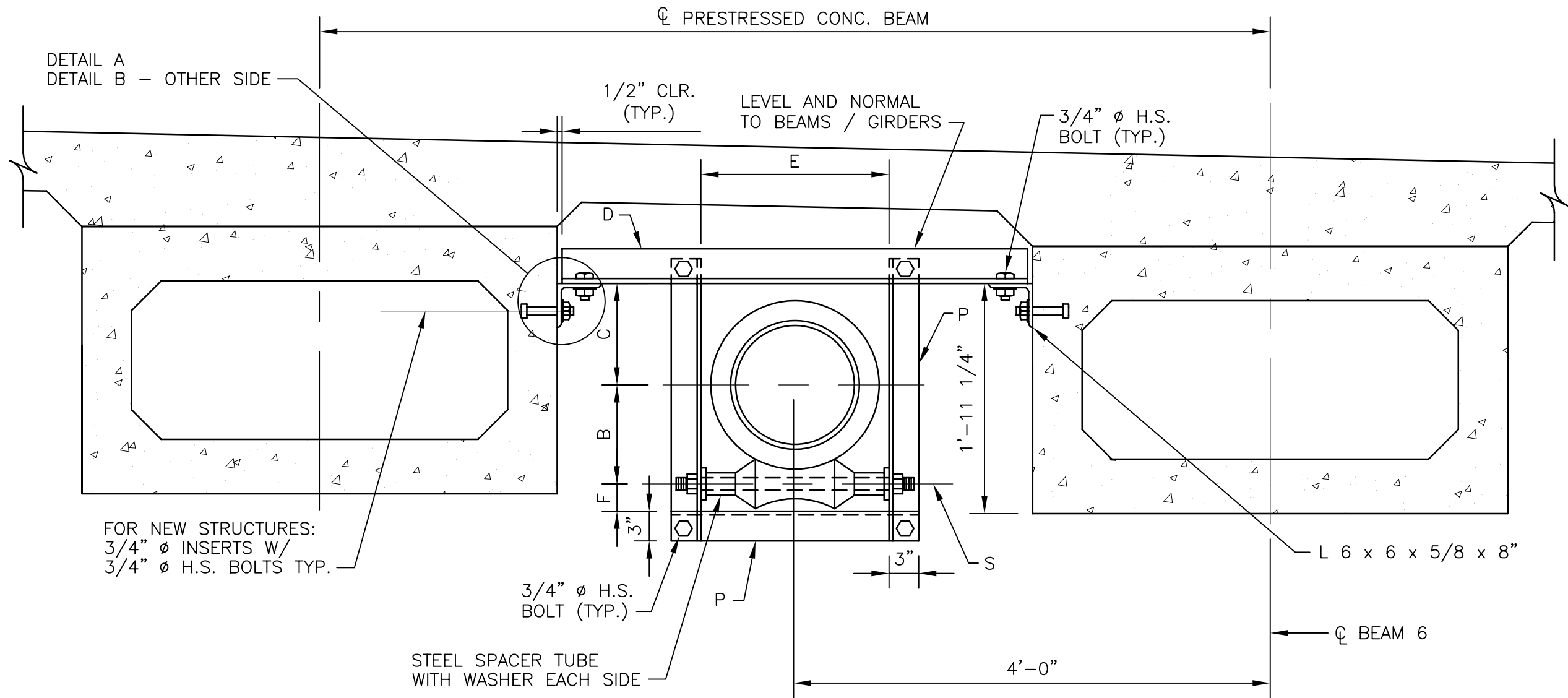
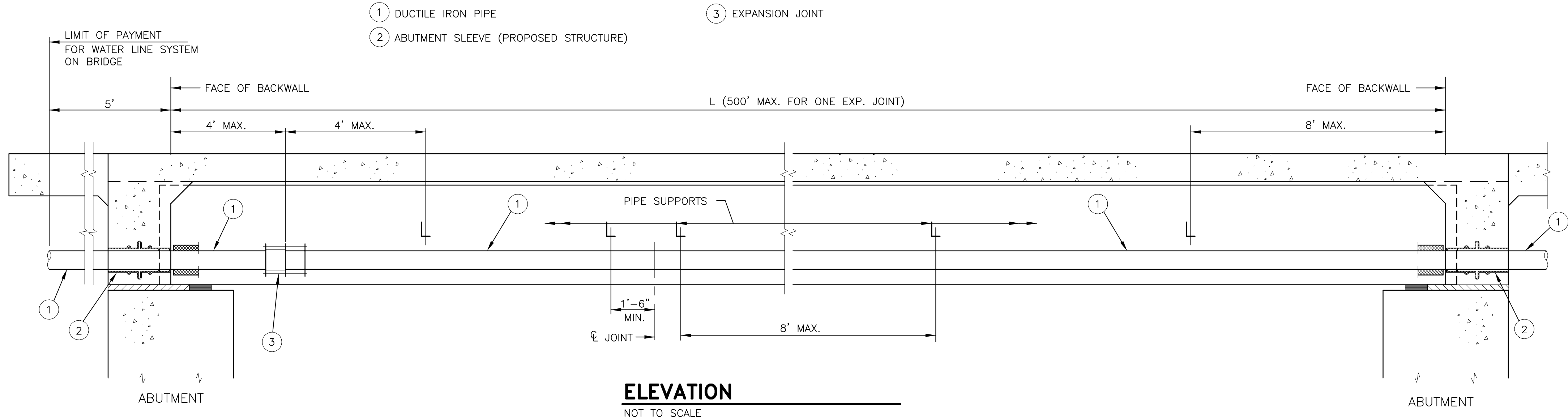


SECTION G-G
NO SCALE



SECTION F-F
NO SCALE

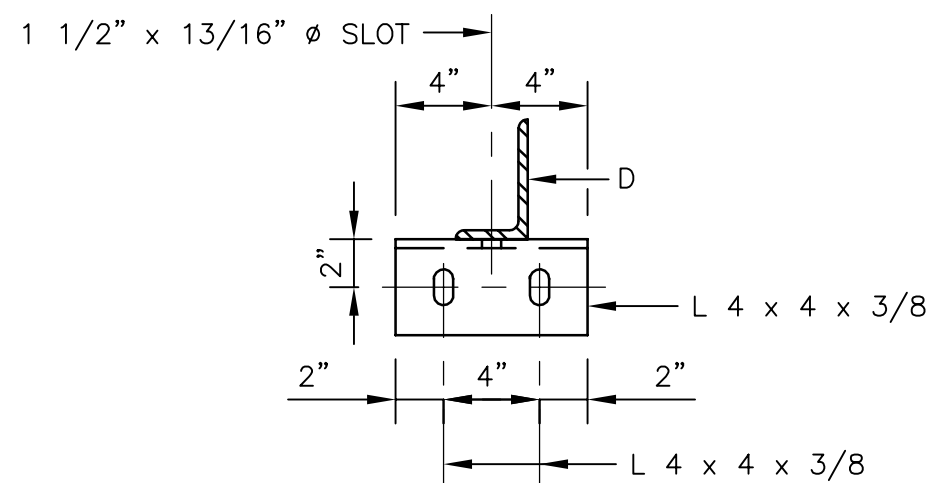
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**TYPICAL SUPPORT DETAIL
AT EXPANSION JOINT**

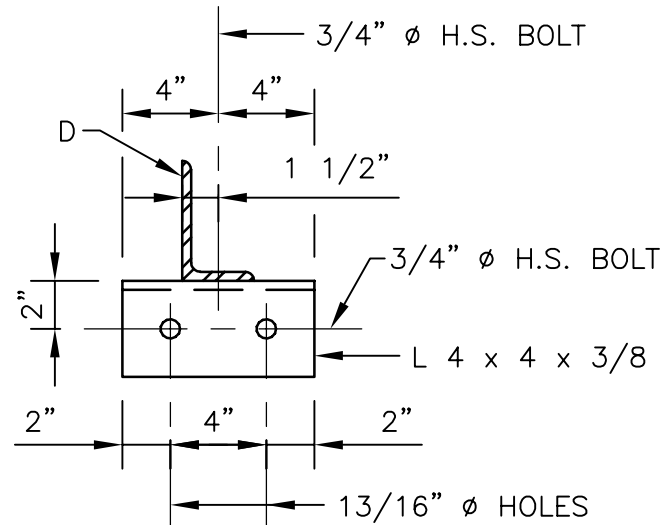
SCALE: 1" = 1'-0"

FOR INSULATION, USE 2" FOAM (URETHANE) INSULATION W/WHITE VINYL COVER AND PROTECTION SADDLES. PROVIDE SUPPORT DETAIL ON BOTH SIDES OF EXPANSION JOINT FOR BRIDGES OVER 500'.



DETAIL A

1 1/2" = 1'-0"



DETAIL B

1 1/2" = 1'-0"

NOTES:

MATERIAL — DUCTILE IRON WITH MECHANICAL JOINT
MINIMUM THICKNESS — CLASS 52 (RATED PRESSURE 300 PSI)
HYDROSTATIC TEST PRESSURE SHALL BE 200 PSI MINIMUM.
SPECIFICATION: ANSI A 21.51/AWWA C151
FINISH — CEMENT LINED; BITUMINOUS OUTER COAT
STEEL CASING — API 5L-B
3/8" WALL

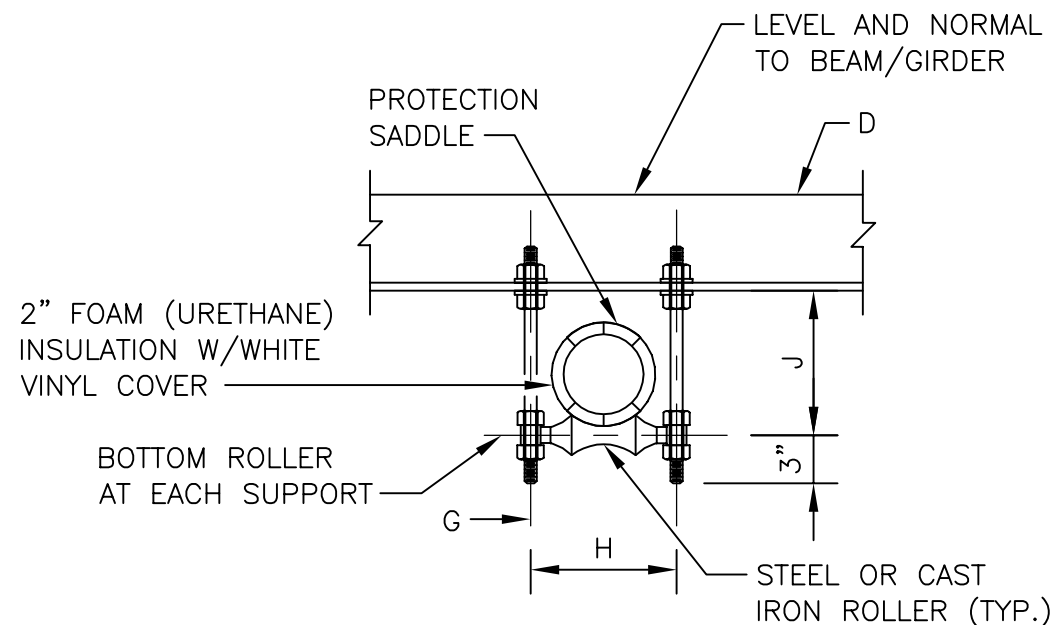
ABUTMENT — CASING AS DETAILED OR CENTURY-LINE SLEEVE TO BE USED FOR PROPOSED STRUCTURE ONLY
SEAL — ONE LINK-SEAL AT EACH FACE

EXPANSION JOINT — DRESSER STYLE 63, TYPE 3

GALVANIZATION — MISCELLANEOUS HARDWARE (ANGLES, RODS, ETC.), UNLESS OTHERWISE SPECIFIED, SHALL BE GALVANIZED.

INSULATION WILL BE REQUIRED.

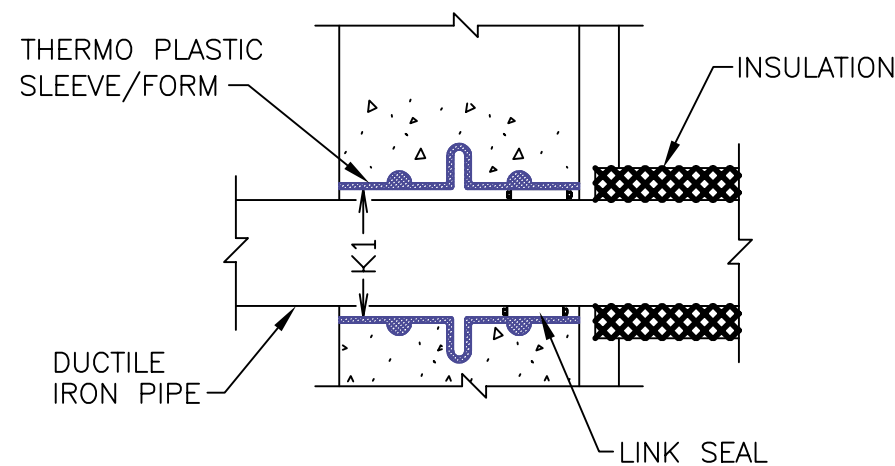
PAYMENT — WATER LINE SYSTEM SHALL BE PAID FOR ON A LUMP SUM BASIS, WHEREIN NO MEASUREMENT SHALL BE MADE, AND SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE, WHICH PRICE SHALL INCLUDE FURNISHING AND INSTALLING DUCTILE IRON WATER MAIN, EXPANSION JOINTS, TESTING, DISINFECTING (WHEN REQUIRED), INSULATION AND COVER (WHEN RERQUIRED), HANGERS, ROLLERS, RODS, ABUTMENT SLEEVES, LINK SEALS, CASING UNDER APPROACH SLAB (WHEN REQUIRED) AND MISCELLANEOUS HARDWARE; ALL AS DETAILED ON THE WATER LINE SYSTEM DRAWING INCLUDED HEREIN AND WITHIN THE PAY LIMITS SHOWN THEREON. SUCH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.



TYPICAL SUPPORT DETAIL

NOT TO SCALE

FOR DETAILS NOT SHOWN, SEE TYPICAL SUPPORT DETAIL AT EXPANSION JOINT.



ABUTMENT SLEEVE DETAIL

NOT TO SCALE

DIMENSIONS																
PIPE Ø	A	B	C	D	E	F	G	H	J	K1	K2	M	N	P	S	
6"	8 1/2"	6 1/2"	6 3/4"	L 6x4x 1/2	1'-1"	2 3/4"	7/8"	1'-2"	1'-1 1/8"	0'-10"	1'-2"	9 11/16"	8 1/8"	L 3x3x 3/8	7/8"	
8"	9 3/4"	7 1/2"	7 3/4"	L 6x4x 1/2	1'-3"	2 3/4"	7/8"	1'-3 3/4"	1'-3 5/8"	1'-0"	1'-4"	1'-0 1/8"	10 5/8"	L 3x3x 3/8	1"	
10"	11 1/2"	8 3/4"	9"	L 6x4x 1/2	1'-5"	2 3/4"	1"	1'-5 3/4"	1'-6 3/4"	1'-2"	1'-6"	1'-2 1/8"	1'-0 5/8"	L 3x3 1/2 x 3/8	1 1/8"	
12"	1'-0 3/4"	10"	10 1/4"	L 6x4x 1/2	1'-7"	2 3/4"	1"	1'-7 3/4"	1'-8 1/4"	1'-4"	1'-8"	1'-4"	1'-3"	L 3x3 1/2 x 3/8	1 1/4"	
14"	11"	8 3/8"	8 5/8"	L 7x4x 1/2	1'-9"	4"	1"	1'-9 1/2"	1'-9 5/8"	1'-6"	1'-10"	1'-5 3/4"	1'-4 3/4"	L 3x4x 3/8	1 1/8"	
16"	1'-0 1/4"	9 1/2"	9 3/4"	L 7x4x 1/2	1'-11"	4"	1"	1'-11 1/2"	1'-11 3/8"	1'-8"	2'-0"	1'-7 3/4"	1'-7"	L 3x4x 3/8	1 1/4"	
18"	1'-1 1/2"	10 1/2"	10 3/4"	L 8x4x 1/2	2'-1"	4"	1 1/8"	2'-1 3/4"	2'-2 1/8"	1'-10"	2'-2"	1'-9 7/8"	1'-9"	L 3x5x 3/8	1 1/4"	
20"	1'-3"	11 5/8"	11 7/8"	L 8x4x 3/4	2'-3"	4"	1 1/4"	2'-4"	2'-4 1/8"	2'-0"	2'-4"	2'-0 1/4"	1'-11 1/4"	L 3x5x 3/8	1 1/4"	
24"	1'-7"	1'-2"	1'-2 1/4"	L 8x4x 3/4	2'-7"	4"	1 1/2"	2'-8 3/8"	2'-9 1/8"	2'-6"	2'-10"	2'-4 5/8"	2'-4"	L 3x5x 3/8	1 1/2"	

G = DIAMETER OF ROD
S = DIAMETER OF SHAFT

HSMW

TRANSPORTATION
COMM. NO. 30089A

THE CITY OF LYNCHBURG, VIRGINIA

DEPT. OF PUBLIC WORKS

ENGINEERING

BEDFORD AVE. BRIDGE OVER NS RWY

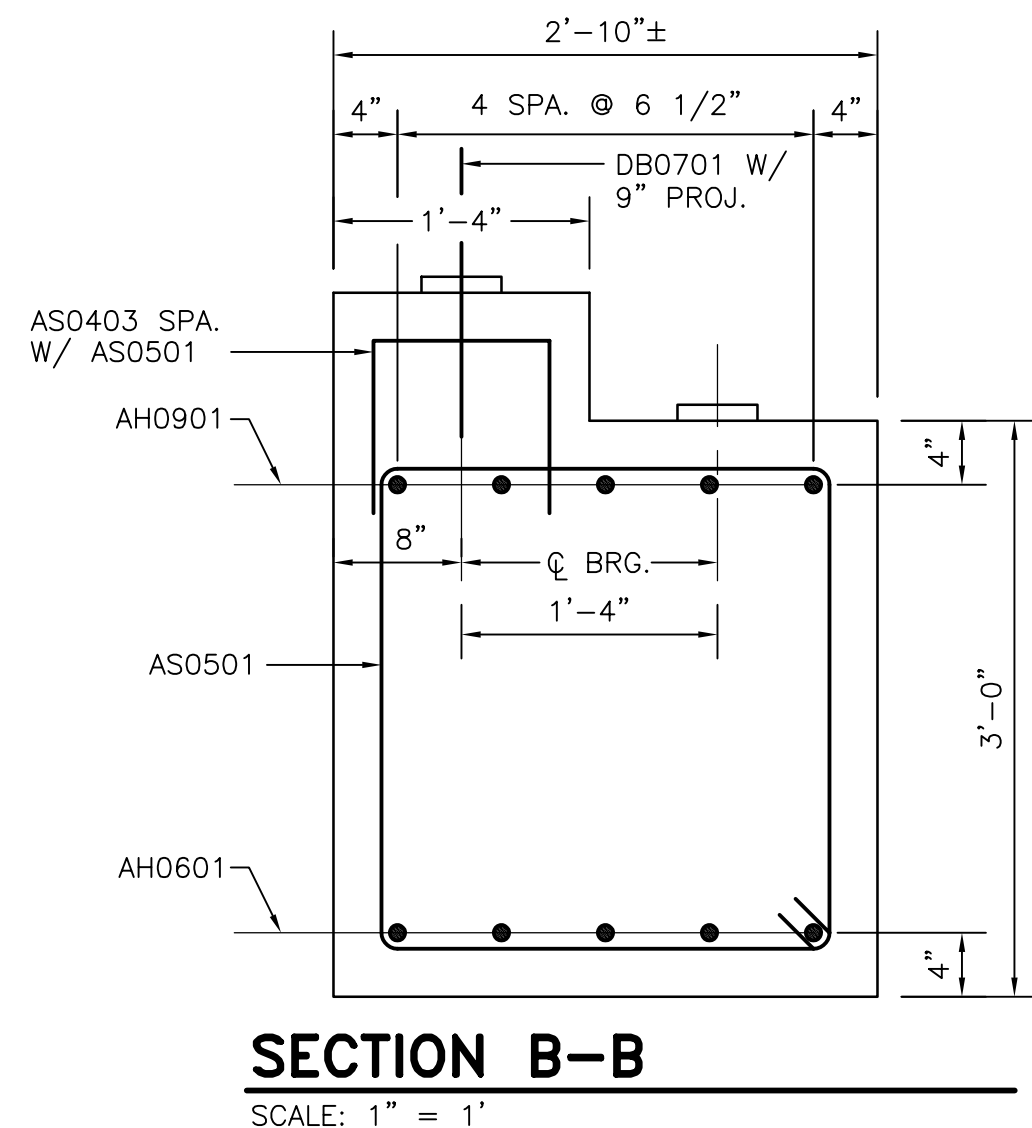
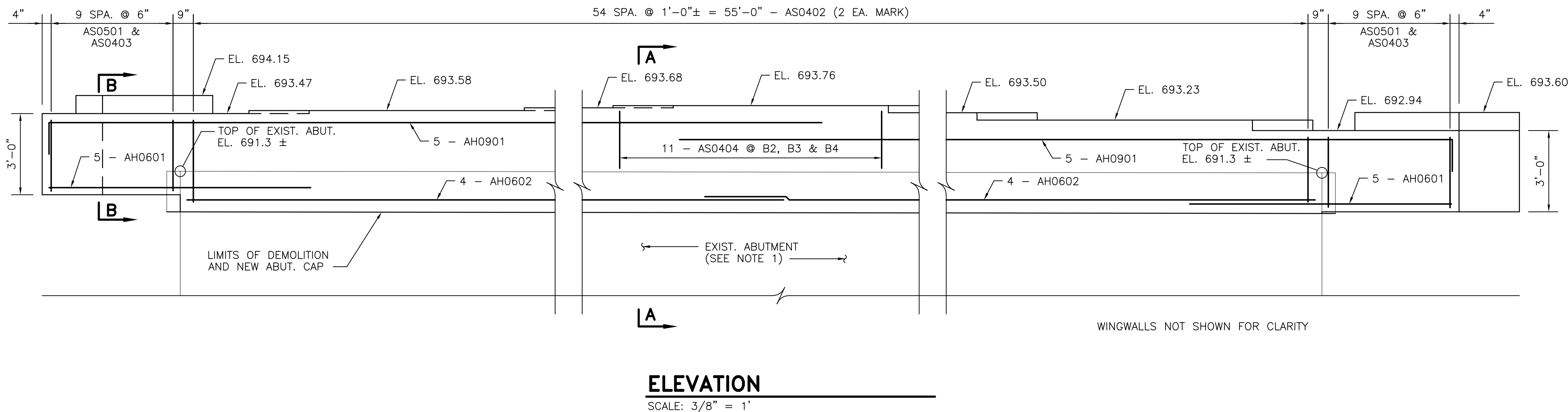
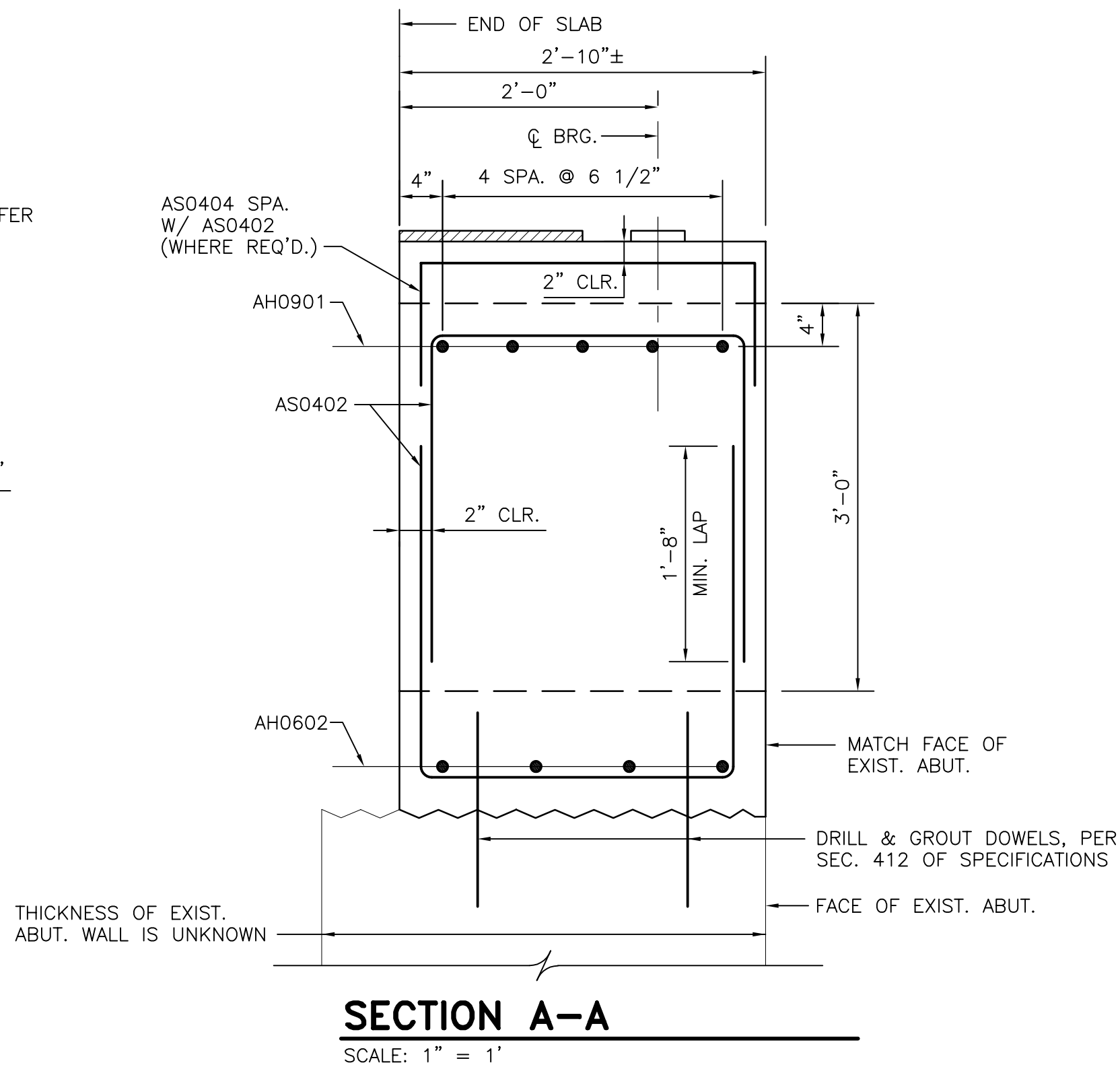
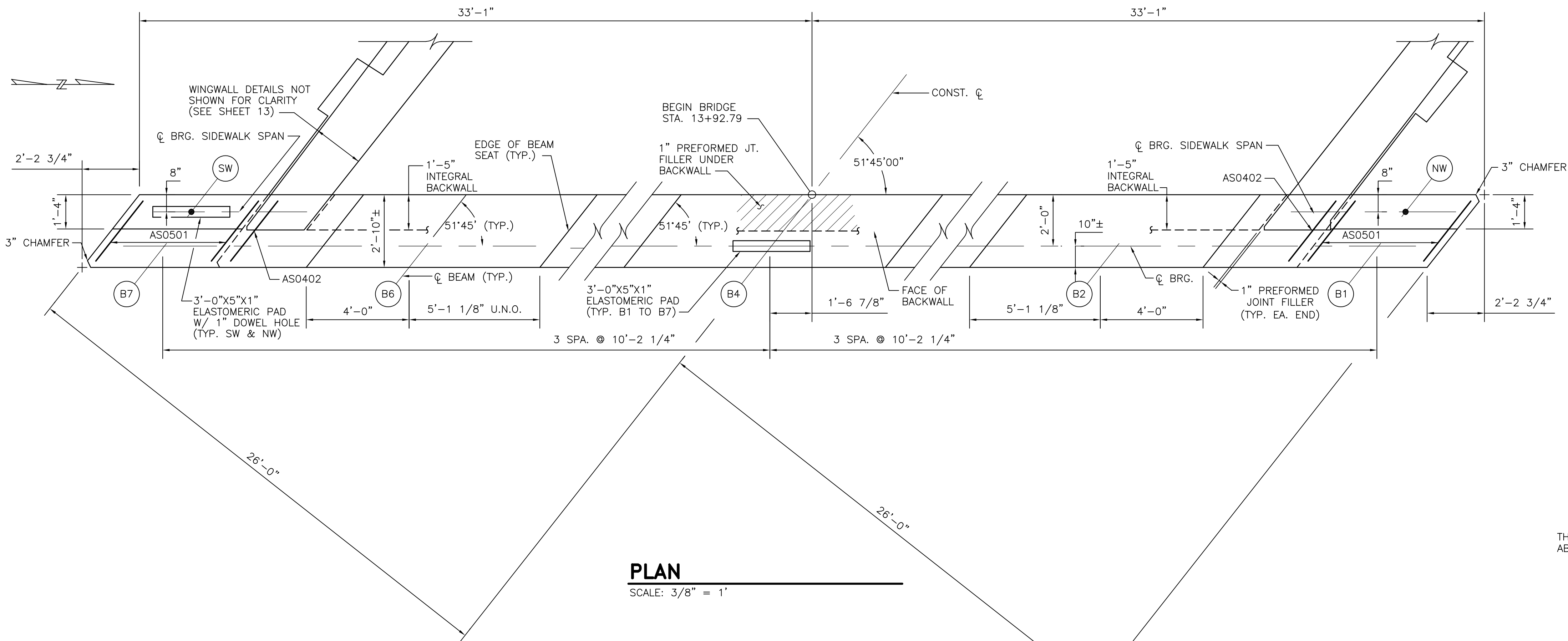
WATER LINE SYSTEM

DESIGNED BY: DRD DRAWN BY: KSF CHECKED BY: DRD

NO. DESCRIPTION DATE SCALE: AS NOTED PROJECT NO.: 03036-BR

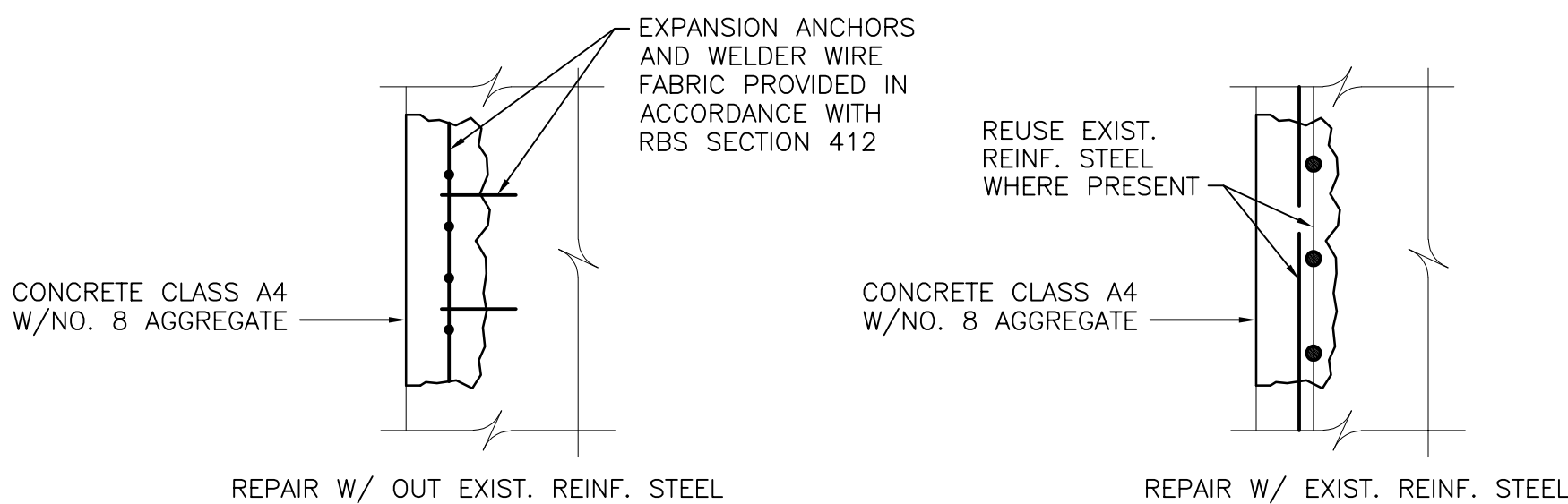
REVISIONS DATE: 14 JAN. 2005 SHEET: 10 OF 24

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HSM--Full.ctb REF: 03036brx_b01.rvt base_survey10.rvt



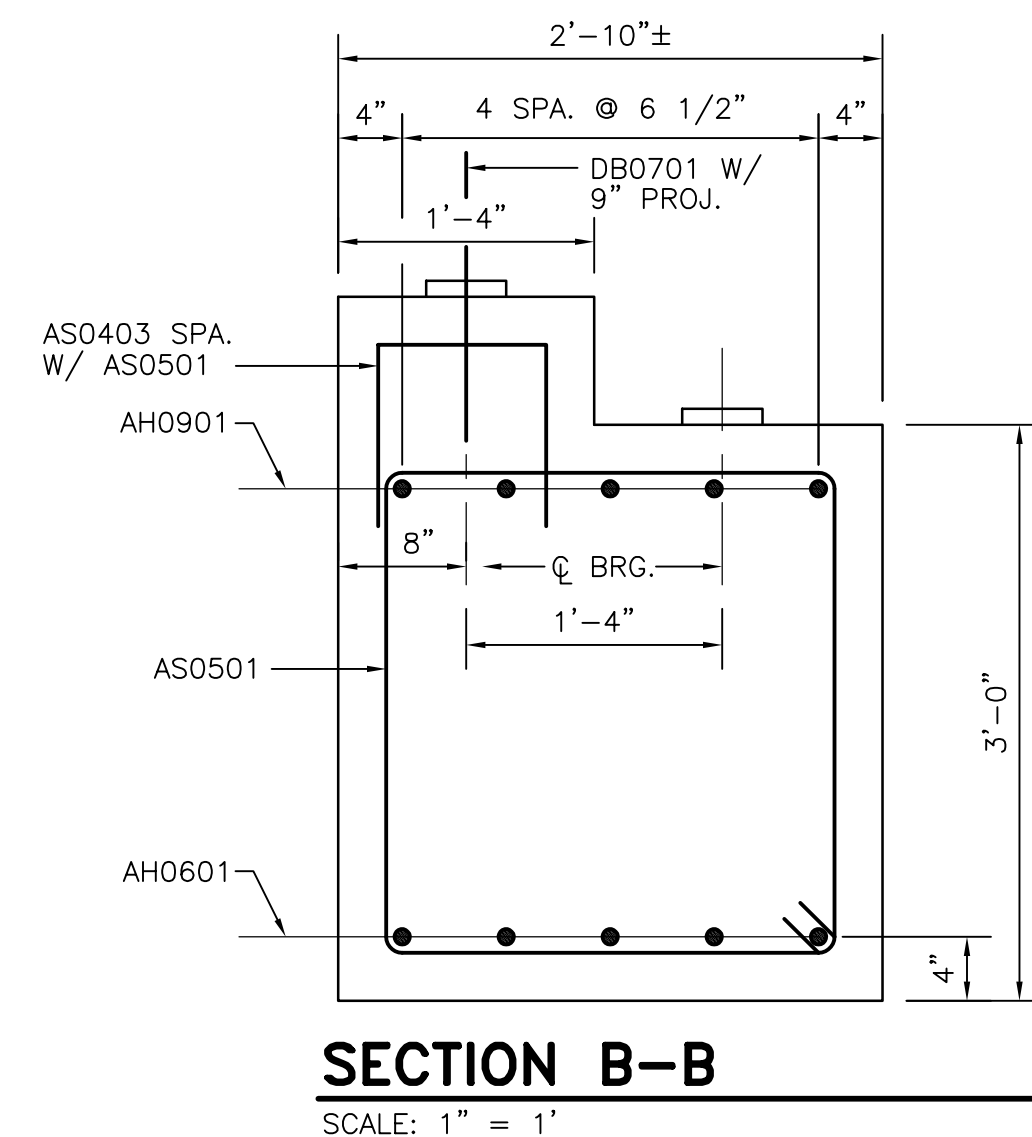
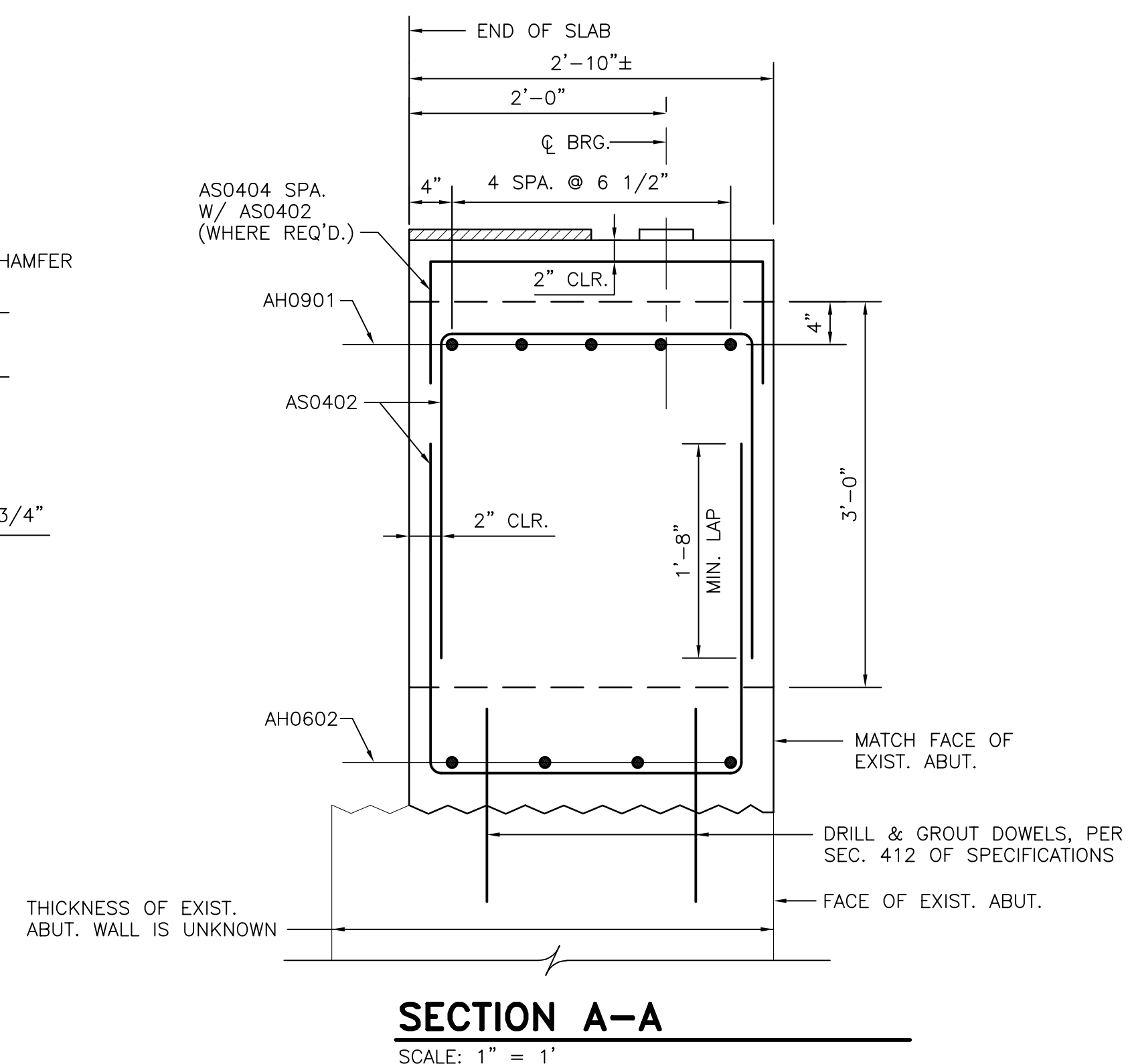
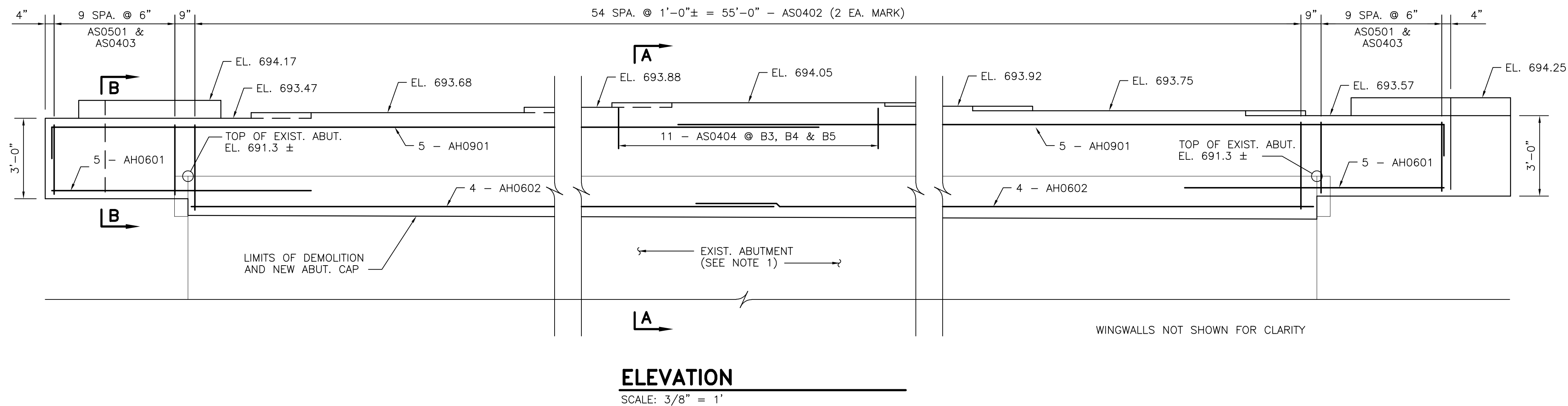
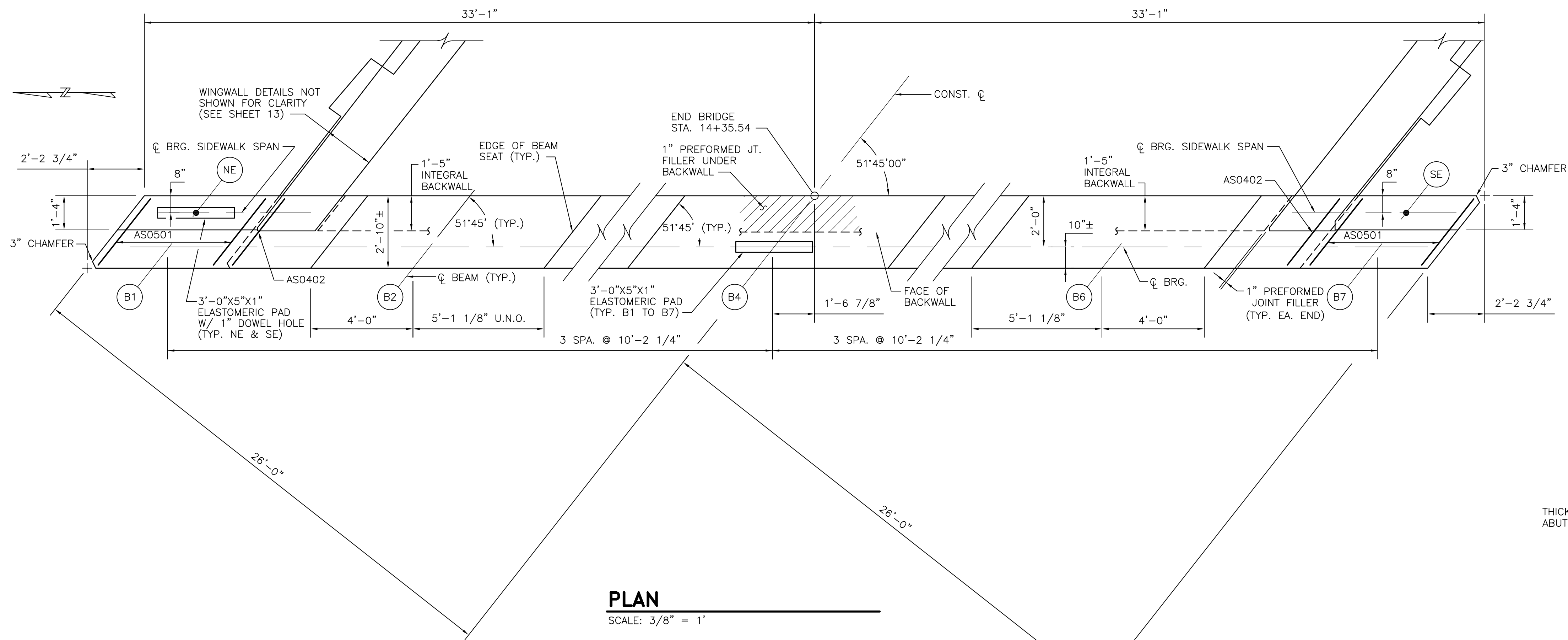
NOTES:

- REPAIR AREAS FOR CONCRETE SUBSTRUCTURE SURFACE REPAIR SHALL BE DESIGNATED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. REPAIRS AT ABUTMENT CORNERS SHALL BE CHAMFERED 3 INCHES. SEE REPAIR DETAIL THIS SHEET.
- FOR ABUTMENT WINGWALL MODIFICATION DETAILS, SEE SHEET 13.
- WINGWALL REINFORCING IN ABUTMENT CAP NOT SHOWN. SEE SHEET 13 FOR DETAILS.



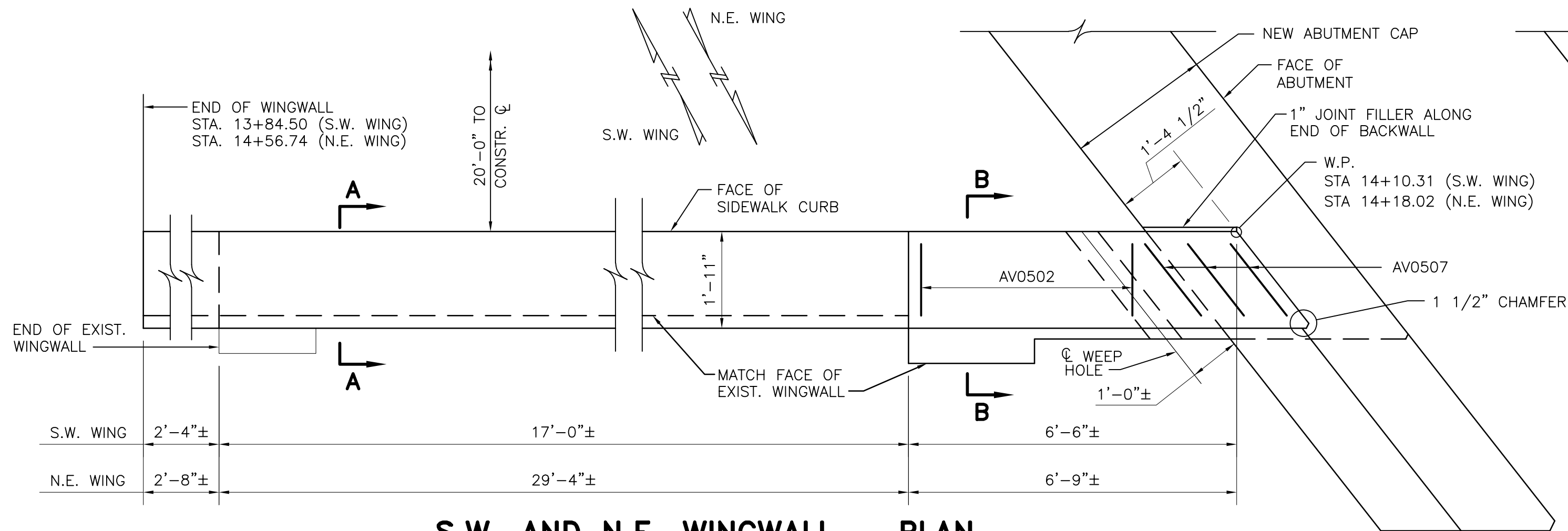
TYPICAL ABUTMENT REPAIR DETAILS
NOT TO SCALE

			THE CITY OF LYNCHBURG, VIRGINIA		
			DEPT. OF PUBLIC WORKS		
			ENGINEERING		
			BEDFORD AVE. BRIDGE OVER NS RWY		
			ABUTMENT A MODIFICATIONS		
			DESIGNED BY: DRD	DRAWN BY: KSF	CHECKED BY: DRD
NO.	DESCRIPTION	DATE	SCALE: AS NOTED	PROJECT NO.: 03036-BR	
REVISIONS			DATE: 14 JAN. 2005	SHEET: 11 OF 24	



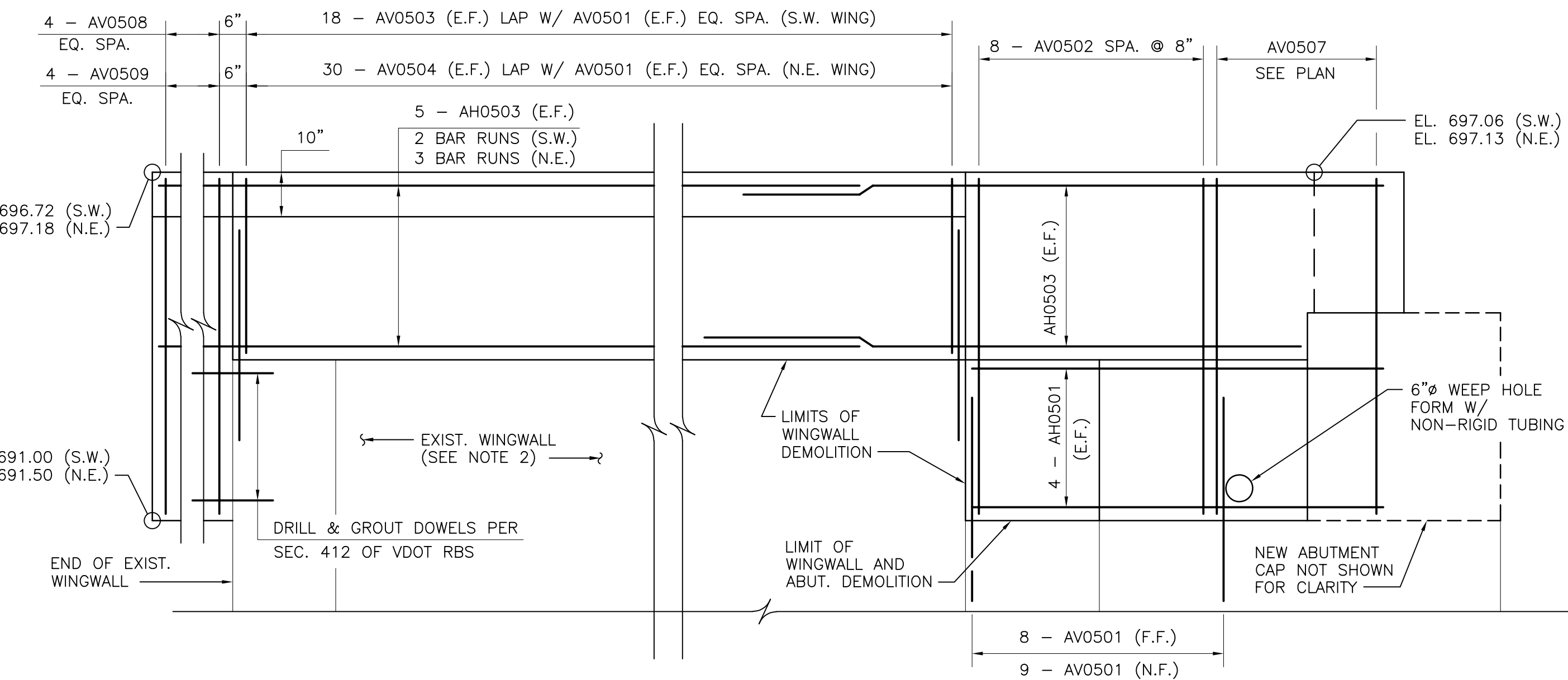
- NOTES:
- REPAIR AREAS FOR CONCRETE SUBSTRUCTURE SURFACE REPAIR SHALL BE DESIGNATED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. REPAIRS AT ABUTMENT CORNERS SHALL BE CHAMFERED 3 INCHES. SEE REPAIR DETAIL SHEET 11.
- FOR ABUTMENT WINGWALL MODIFICATION DETAILS, SEE SHEET 13.
- WINGWALL REINFORCING IN ABUTMENT CAP NOT SHOWN. SEE SHEET 13 FOR DETAILS.

M:\FILES\30000SERIES\30089A\CADD\DWG\03036BR13AB.DWG C30089A 02/04/2005 10:28:03 KFIELD
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S.W. AND N.E. WINGWALL - PLAN

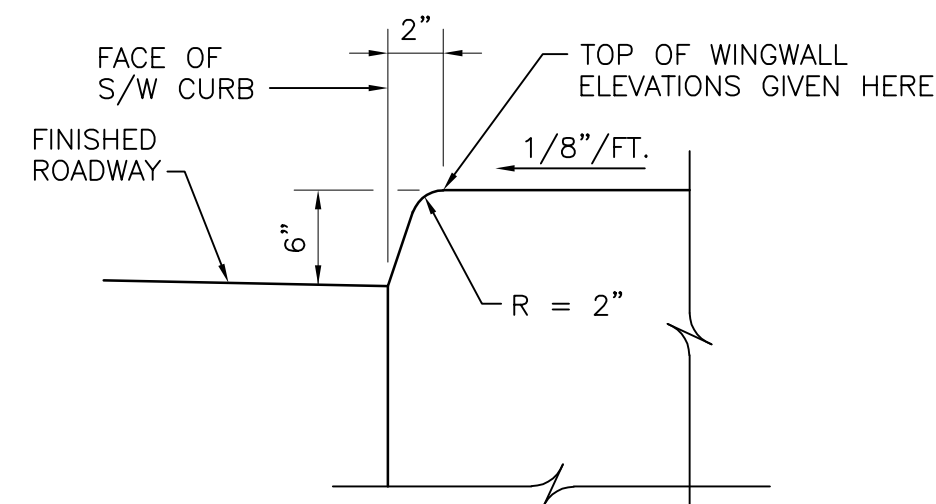
SCALE: 1/2" = 1'



S.W. AND N.E. WINGWALL - ELEVATION

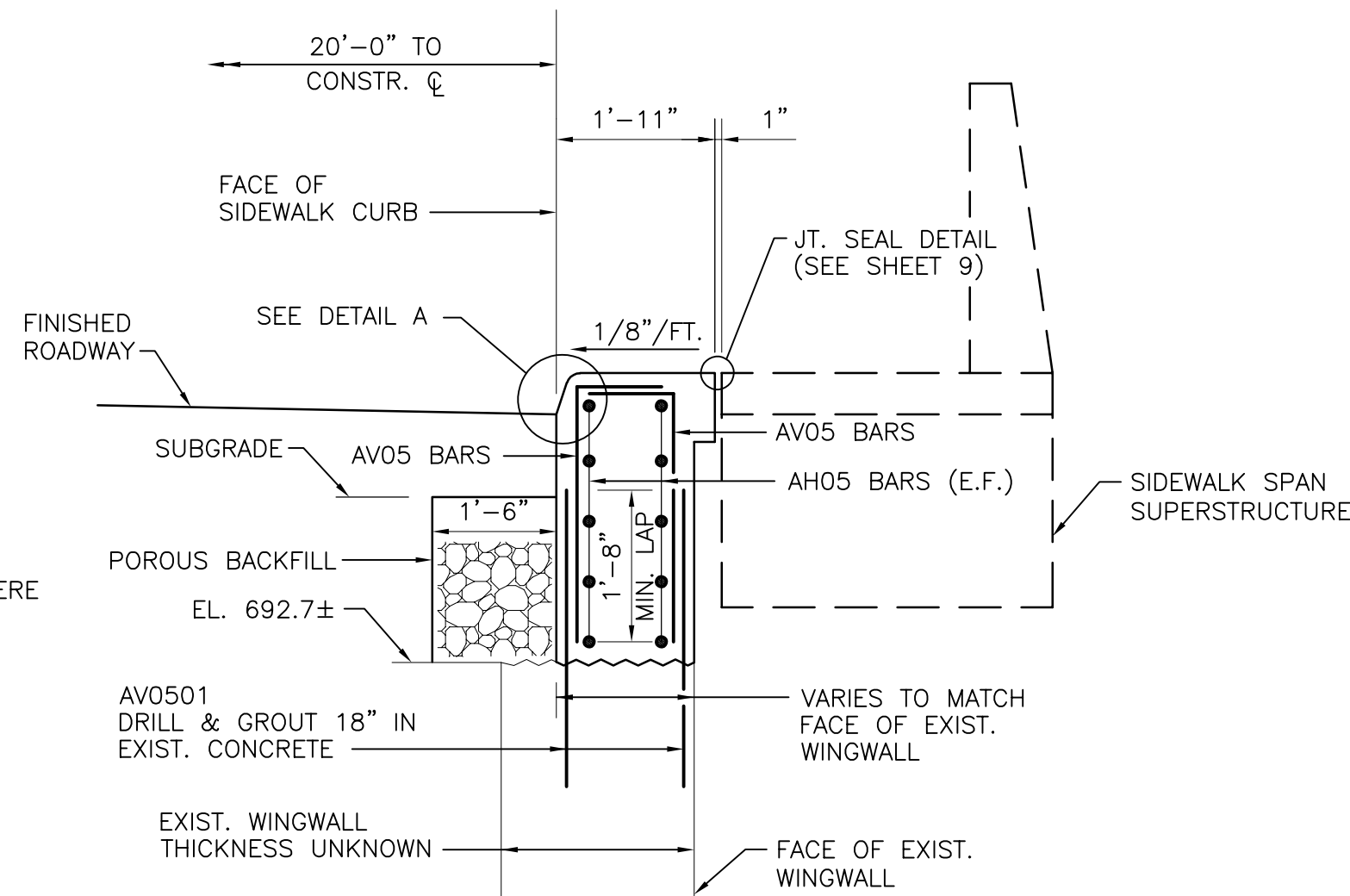
SCALE: 1/2" = 1'

TOP OF WINGWALL ELEVATIONS			
	W.P.	O.S.L	END WINGWALL
N.W. WINGWALL	STA. 13+78.77	STA. 13+56.26	STA. 13+33.74
	ELEV. 696.62	ELEV. 696.17	ELEV. 695.72
N.E. WINGWALL	STA. 14+18.02	STA. 14+37.38	STA. 14+56.74
	ELEV. 697.13	ELEV. 697.21	ELEV. 697.18
S.W. WINGWALL	STA. 14+10.31	STA. 13+97.40	STA. 13+84.50
	ELEV. 697.06	ELEV. 696.92	ELEV. 696.72
S.E. WINGWALL	STA. 14+49.56	STA. 14+72.95	STA. 14+96.34
	ELEV. 697.20	ELEV. 697.06	ELEV. 696.83



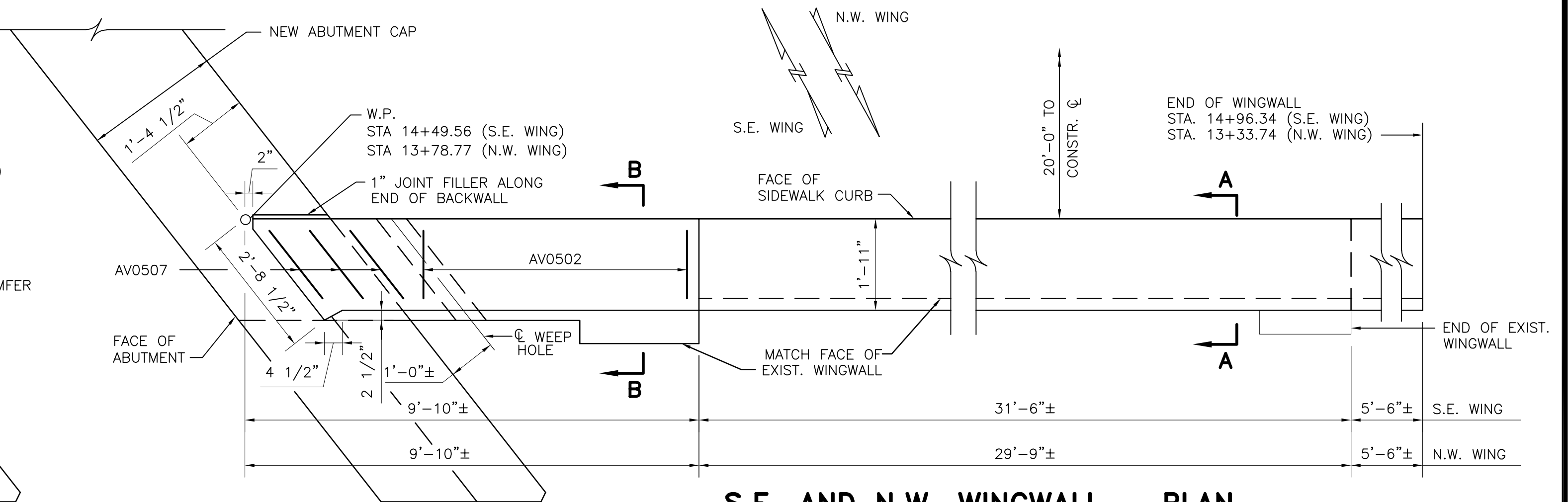
DETAIL A

NOT TO SCALE



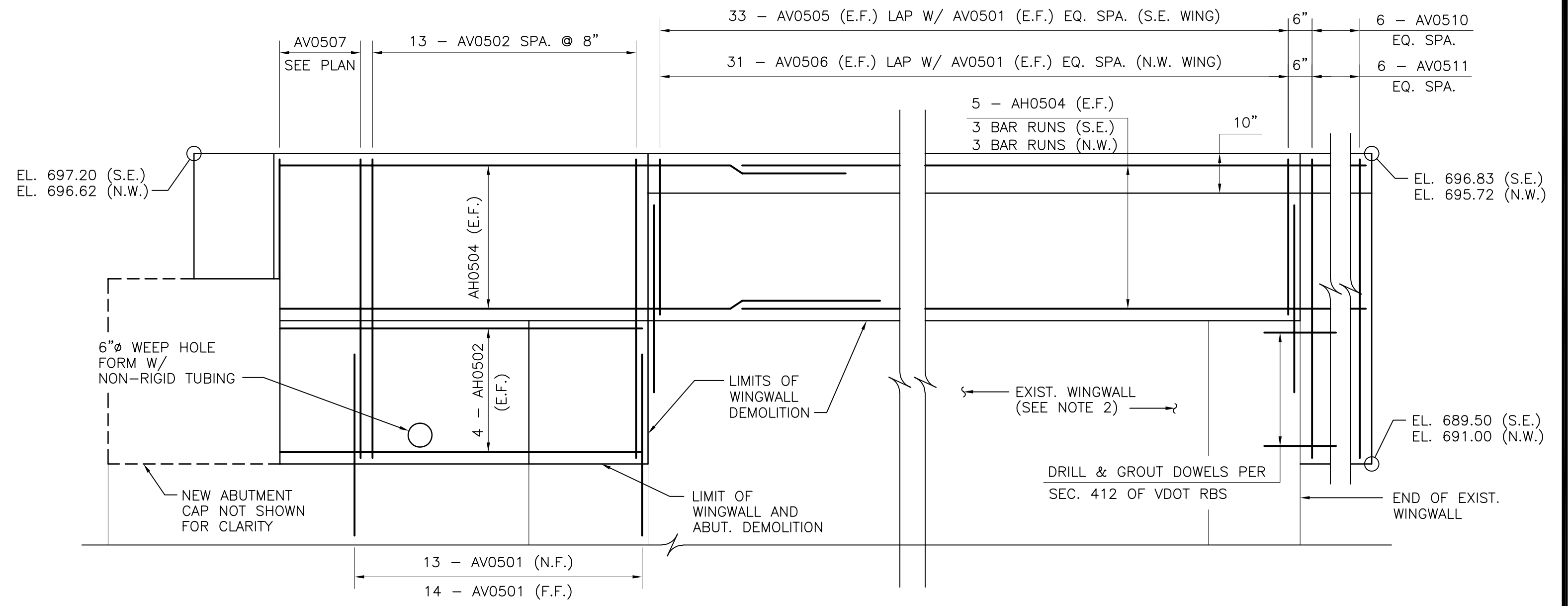
SECTION A-A

SCALE: 1/2" = 1'



S.E. AND N.W. WINGWALL - PLAN

SCALE: 1/2" = 1'

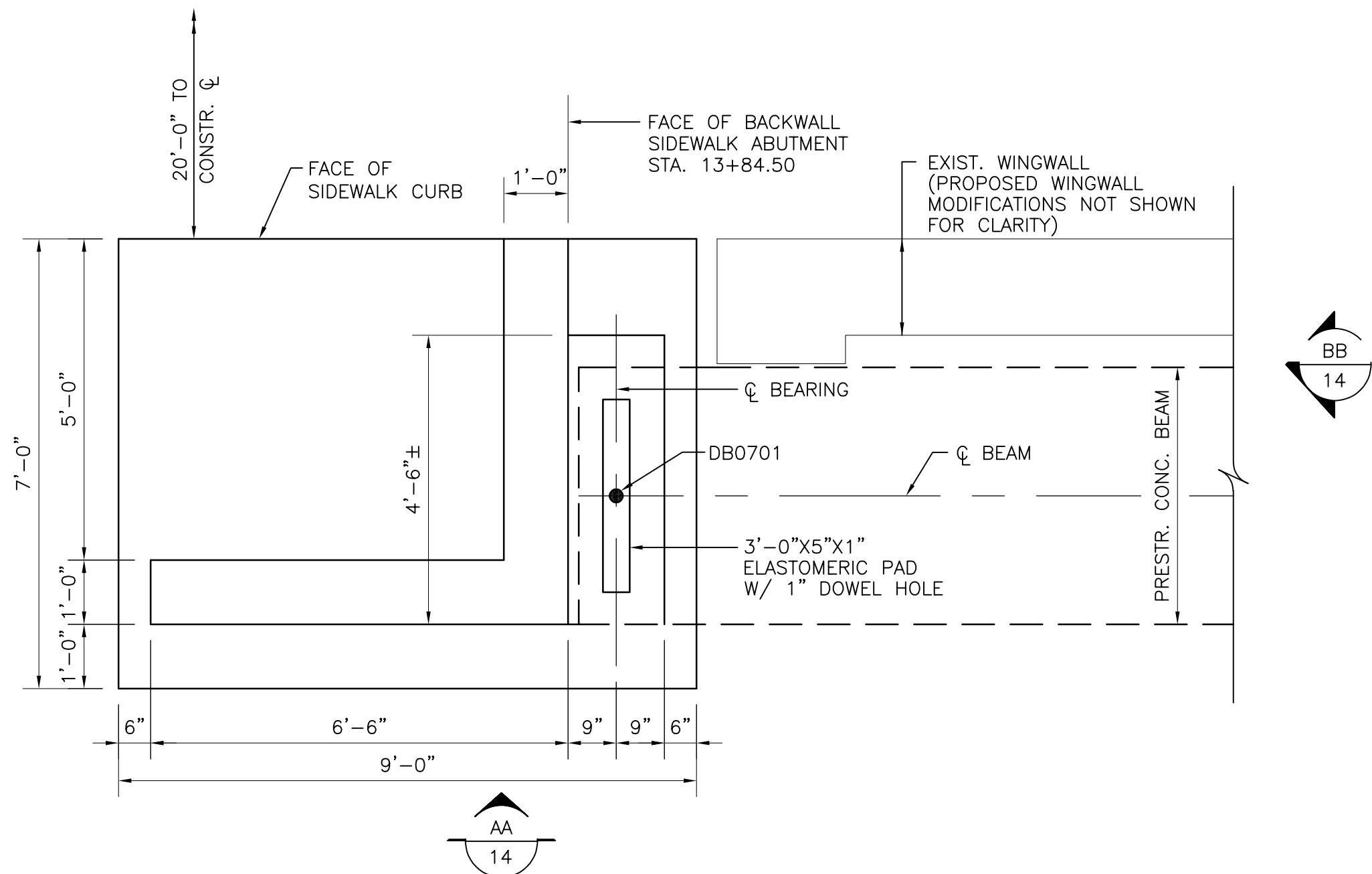


S.E. AND N.W. WINGWALL - ELEVATION

SCALE: 1/2" = 1'

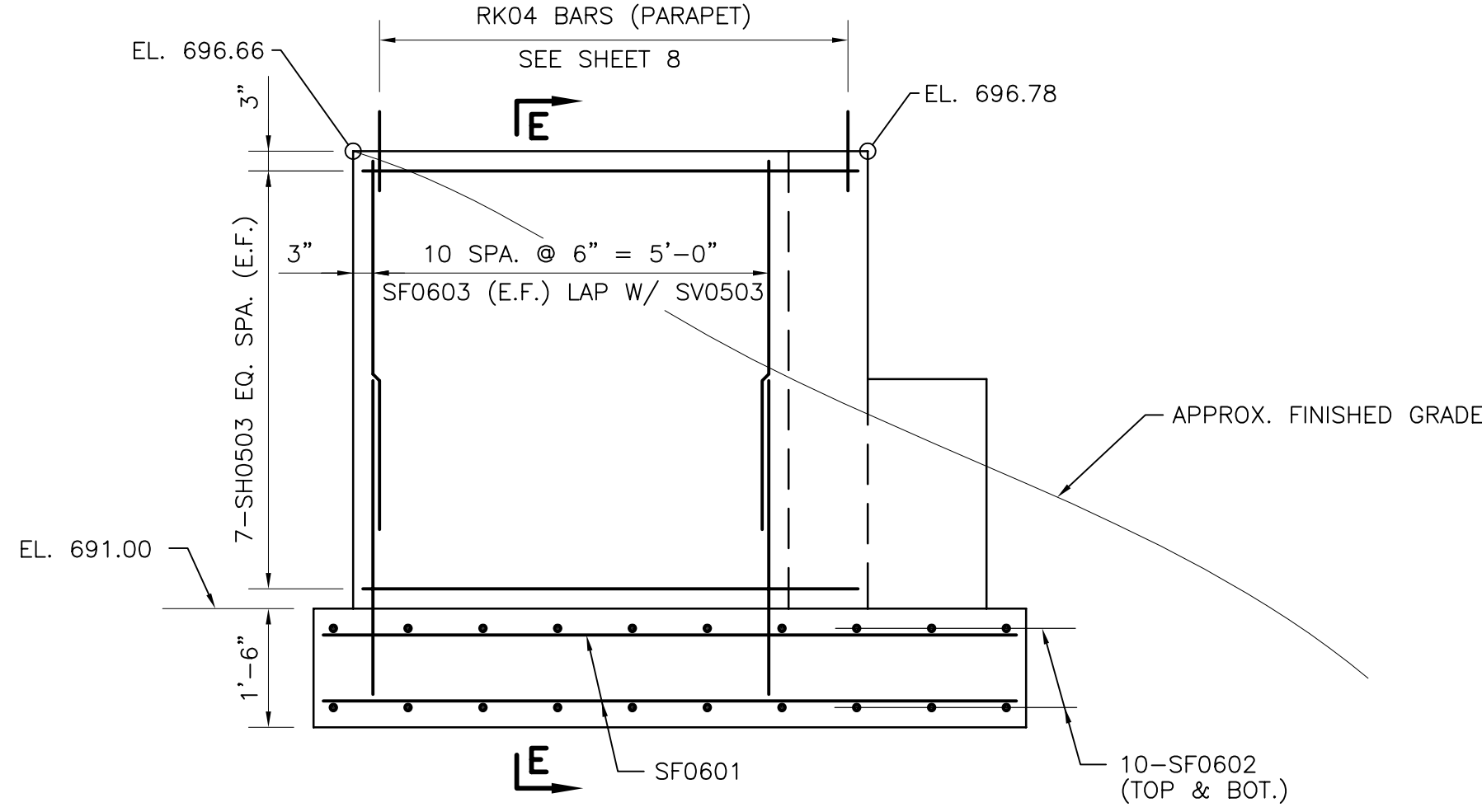
NOTES:

- FOR LIMITS OF DEMOLITION, SEE SHEET 3.
- REPAIR AREAS FOR CONCRETE SUBSTRUCTURE SURFACE REPAIR SHALL BE DESIGNATED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. SEE REPAIR DETAIL SHEET 11.
- FOR JOINT SEAL DETAILS, SEE SHEET 9.



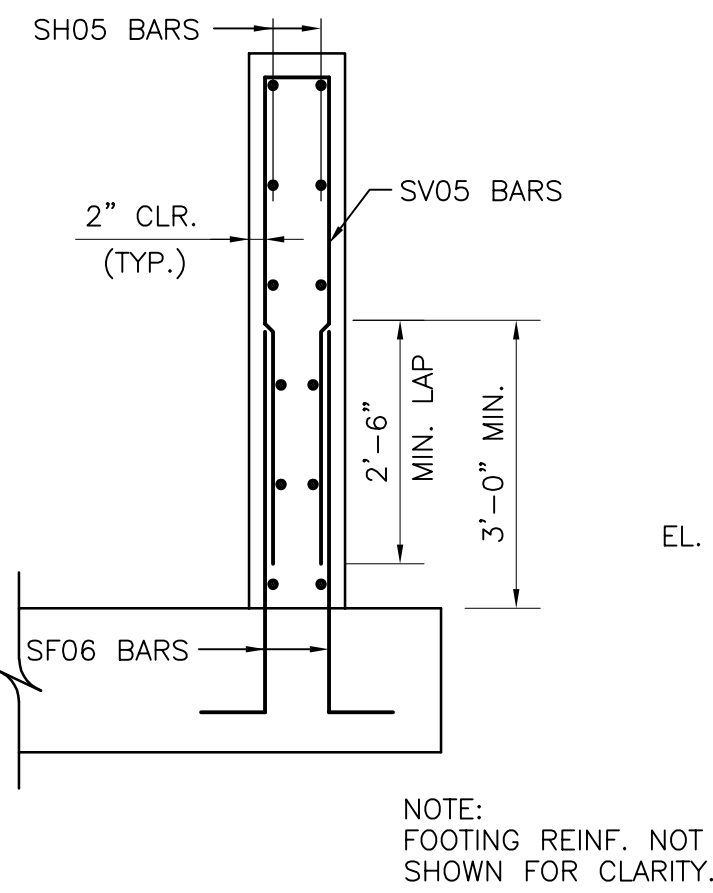
S.W. SIDEWALK ABUT. - PLAN

SCALE: 1/2" = 1'-0"



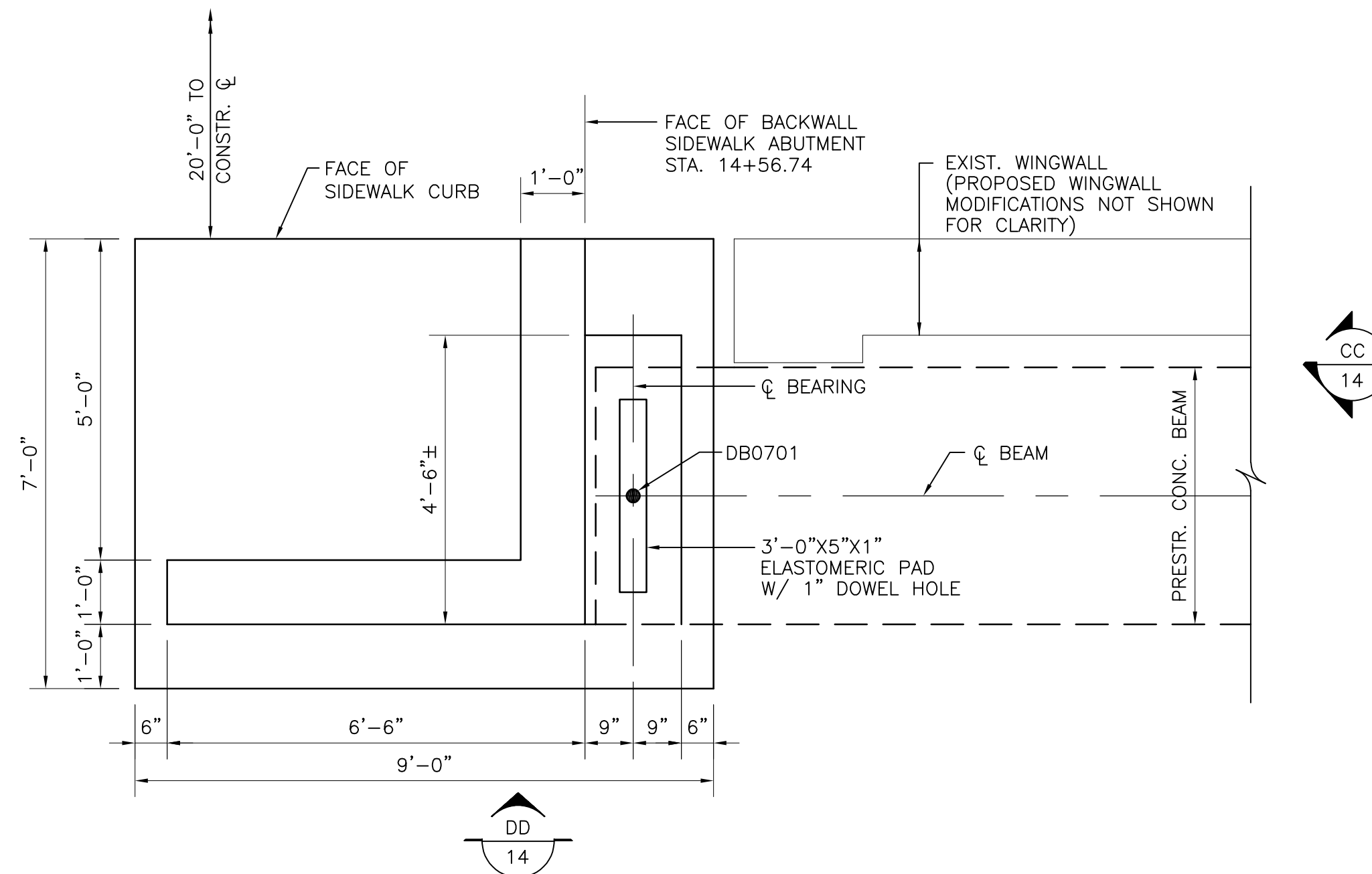
S.W. SIDEWALK ABUT. - ELEVATION A-A

SCALE: 1/2" = 1'-0"



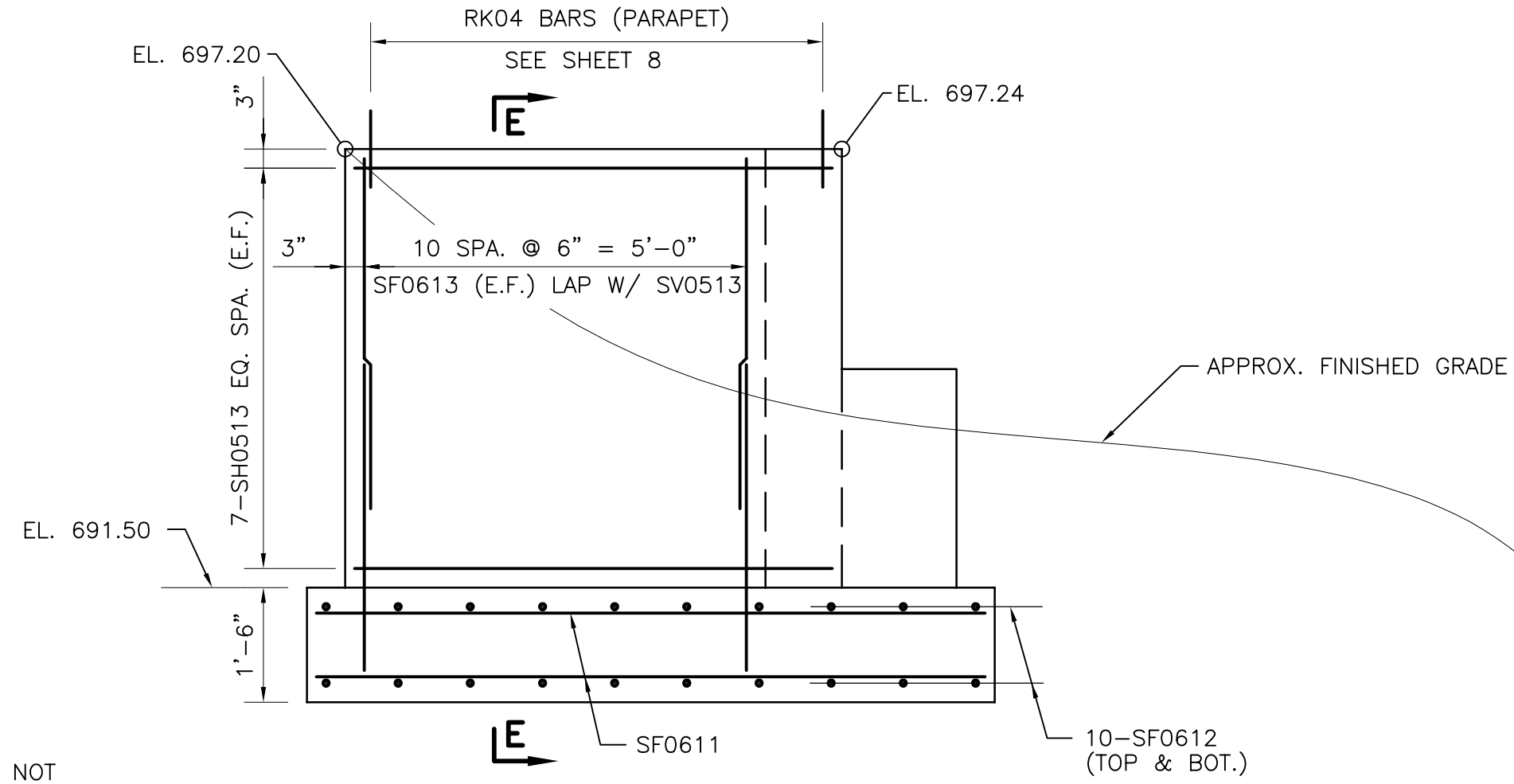
SECTION E-E

NOT TO SCALE



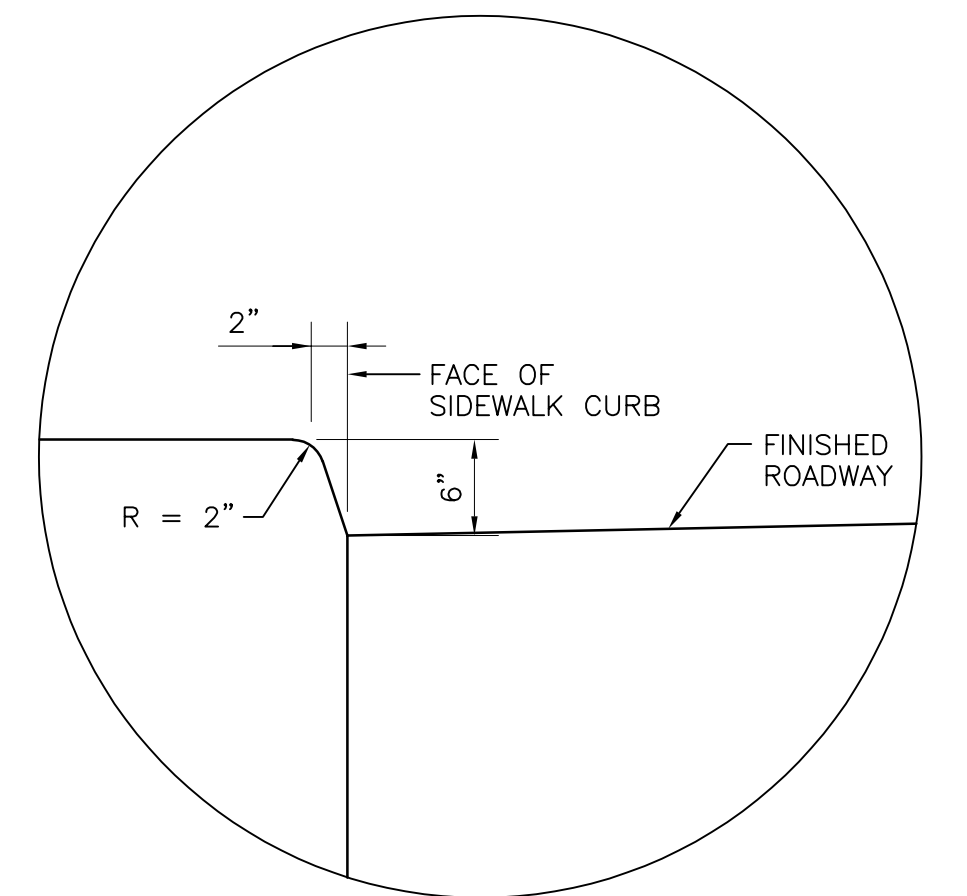
N.E. SIDEWALK ABUT. - PLAN

SCALE: 1/2" = 1'-0"



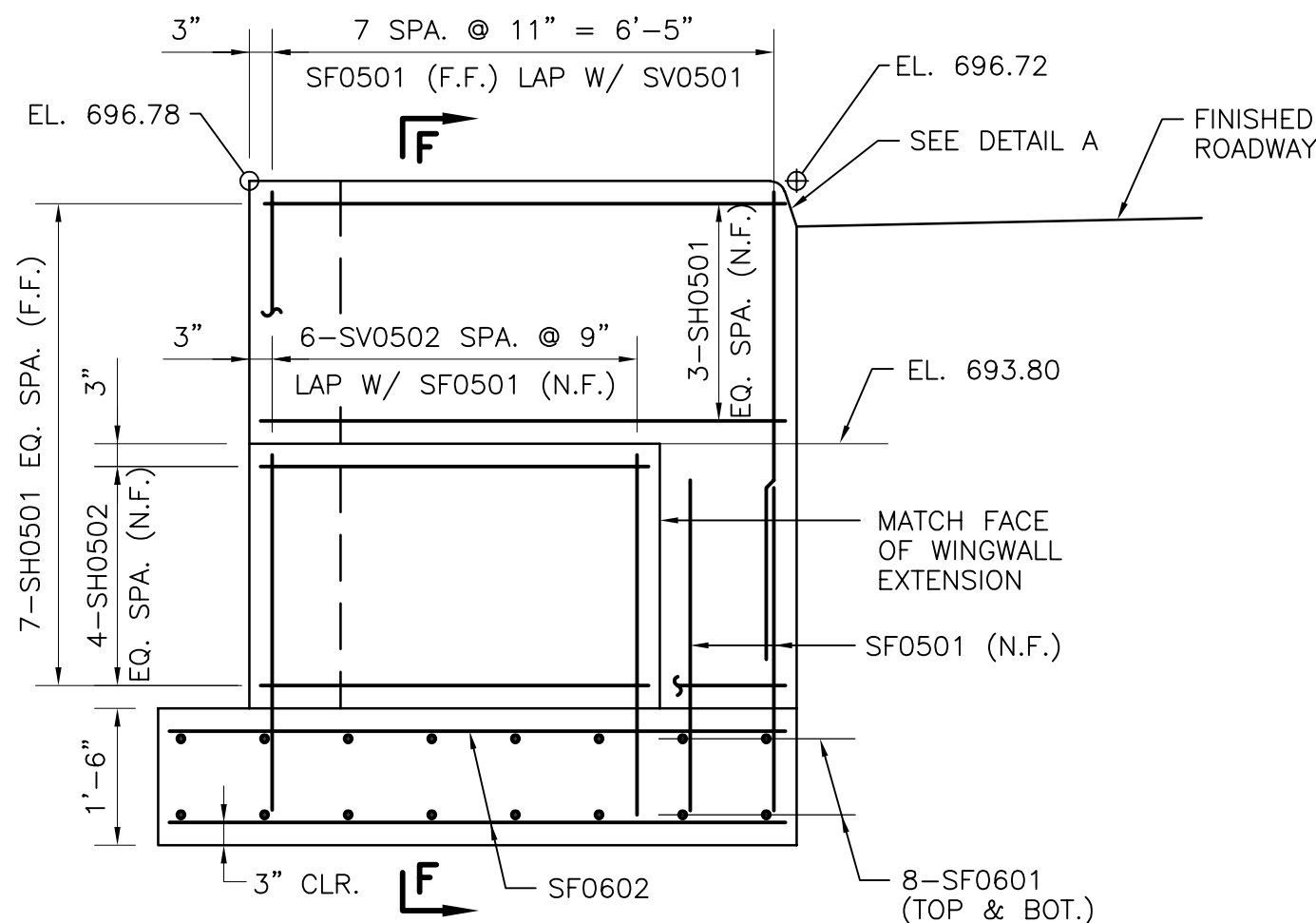
N.E. SIDEWALK ABUT. - ELEVATION D-D

SCALE: 1/2" = 1'-0"



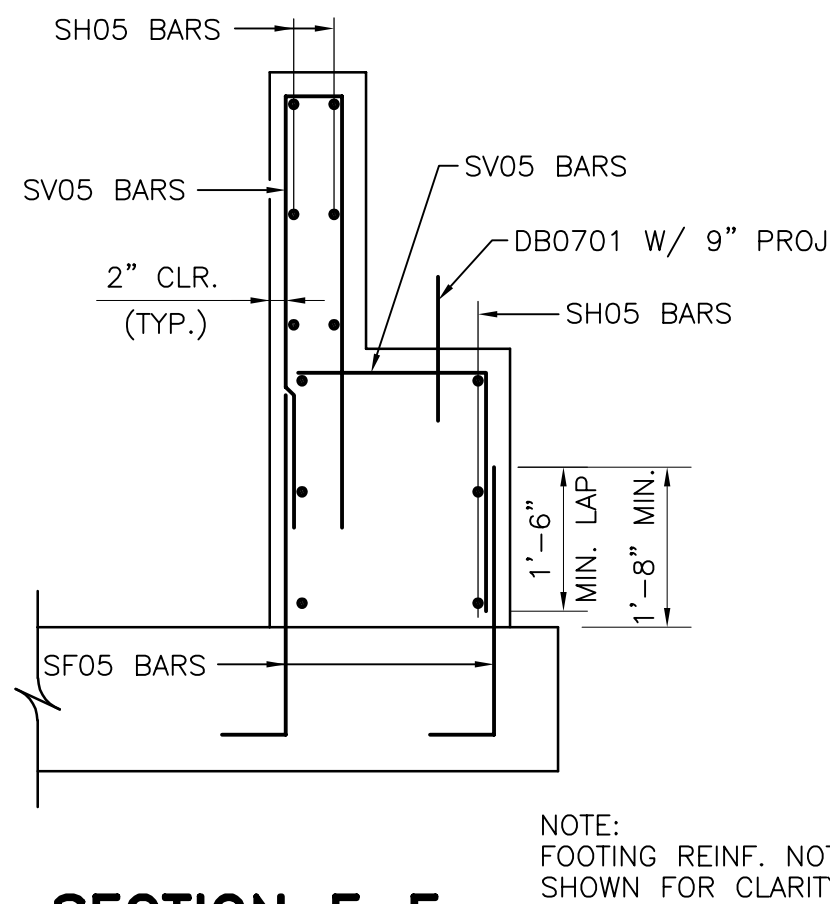
DETAIL A

SCALE: 1" = 1'



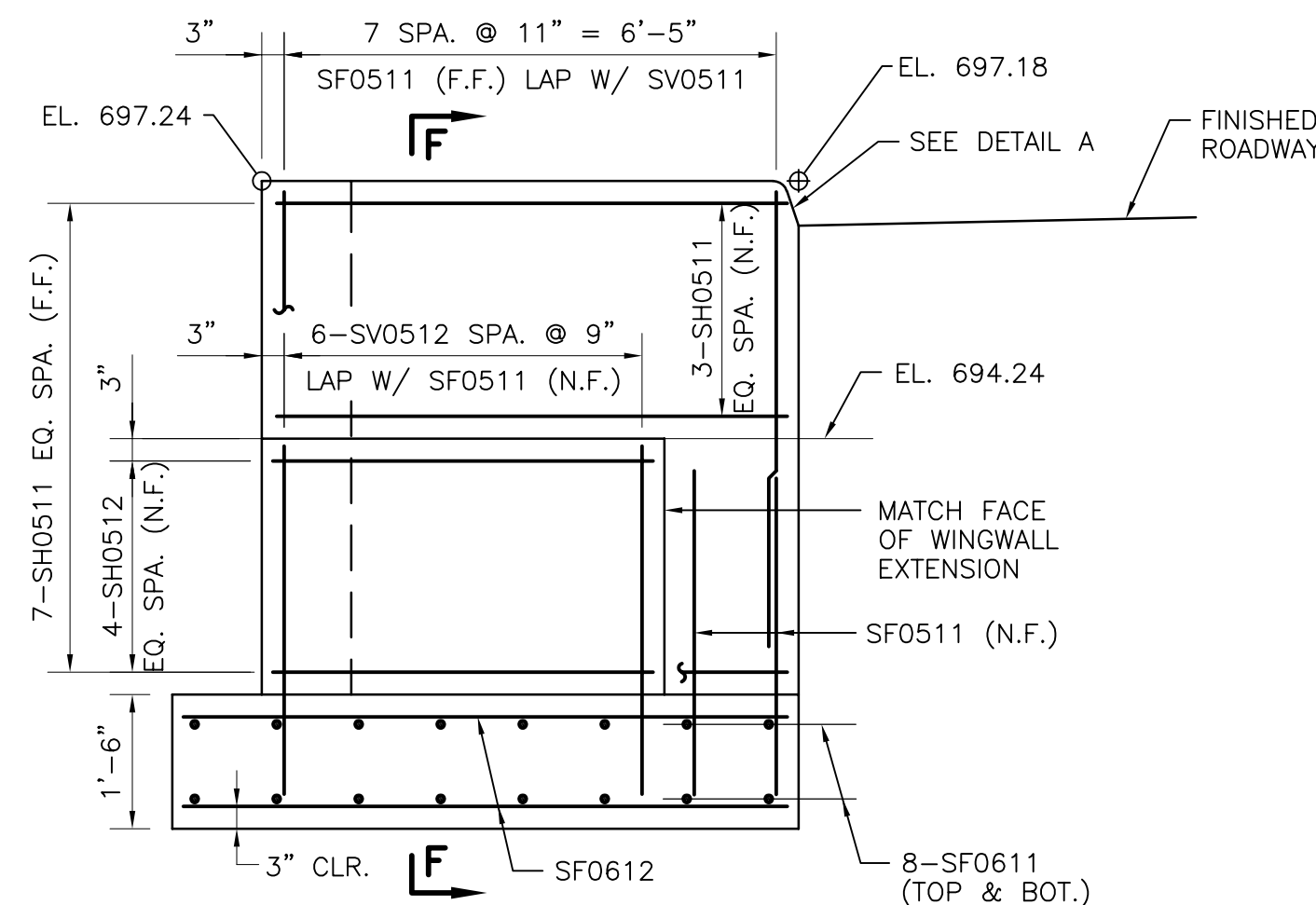
S.W. SIDEWALK ABUT. - ELEVATION B-B

SCALE: 1/2" = 1'-0"



SECTION F-F

NOT TO SCALE



N.E. SIDEWALK ABUT. - ELEVATION C-C

SCALE: 1/2" = 1'-0"

HSM

TRANSPORTATION
COMM. NO. 30089A

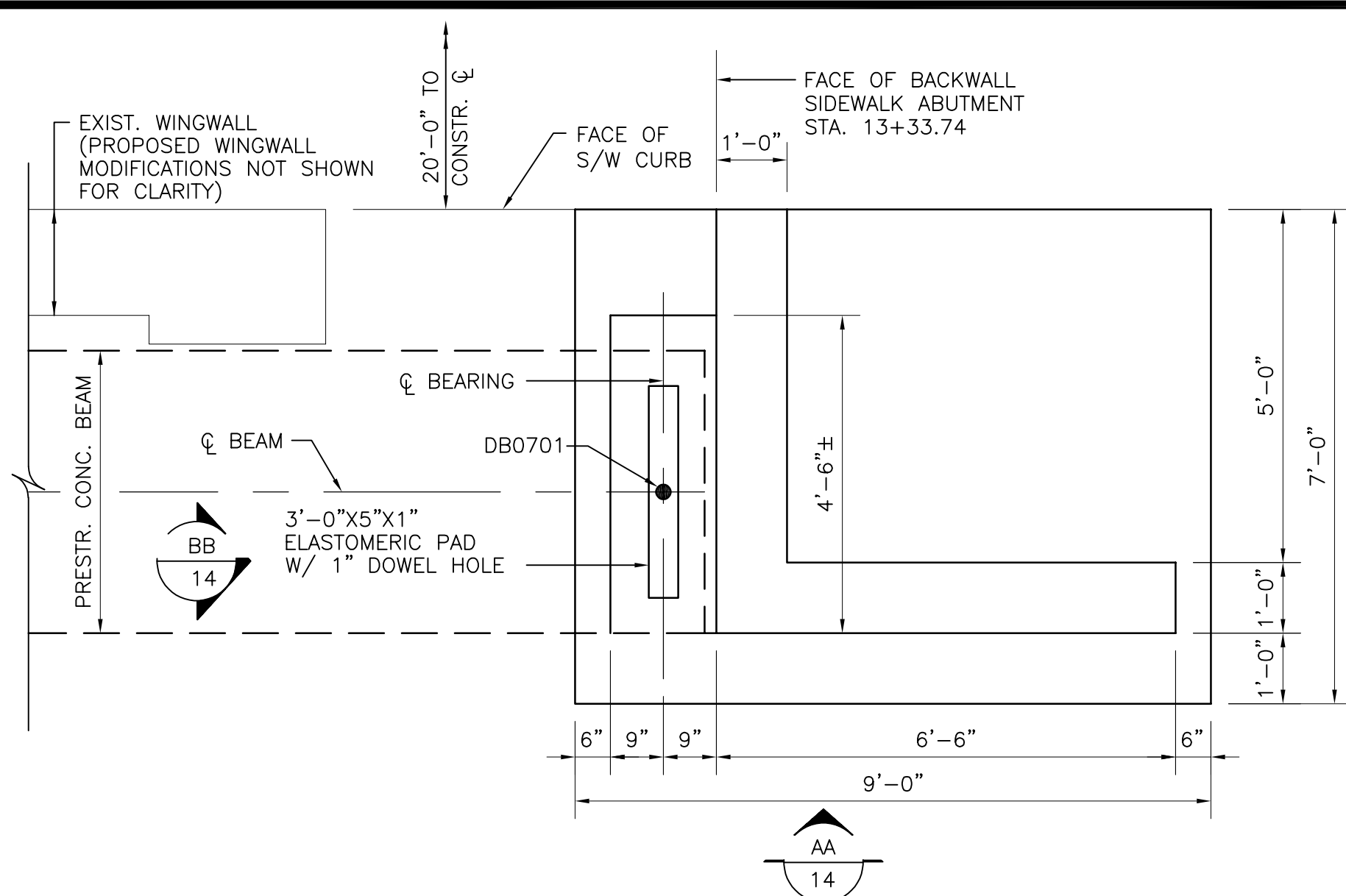
THE CITY OF LYNCHBURG, VIRGINIA
DEPT. OF PUBLIC WORKS
ENGINEERING

BEDFORD AVE. BRIDGE OVER NS RWY

SIDEWALK ABUTMENTS
1 OF 2

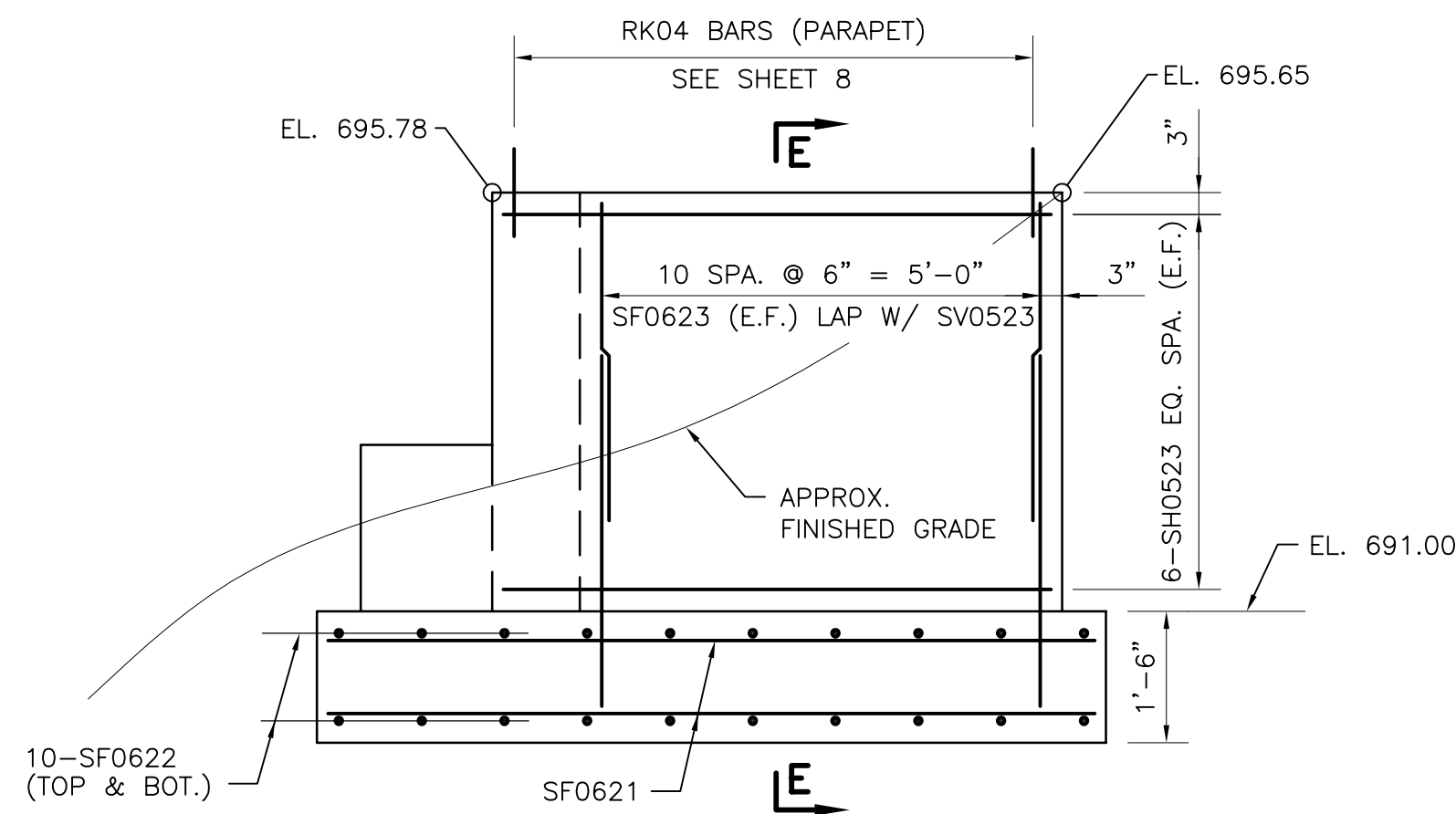
DESIGNED BY: DRD	DRAWN BY: KSF	CHECKED BY: DRD
NO.	DESCRIPTION	DATE
SCALE: AS NOTED	PROJECT NO.: 03036-BR	
REVISIONS	DATE: 14 JAN. 2005	SHEET: 14 OF 24

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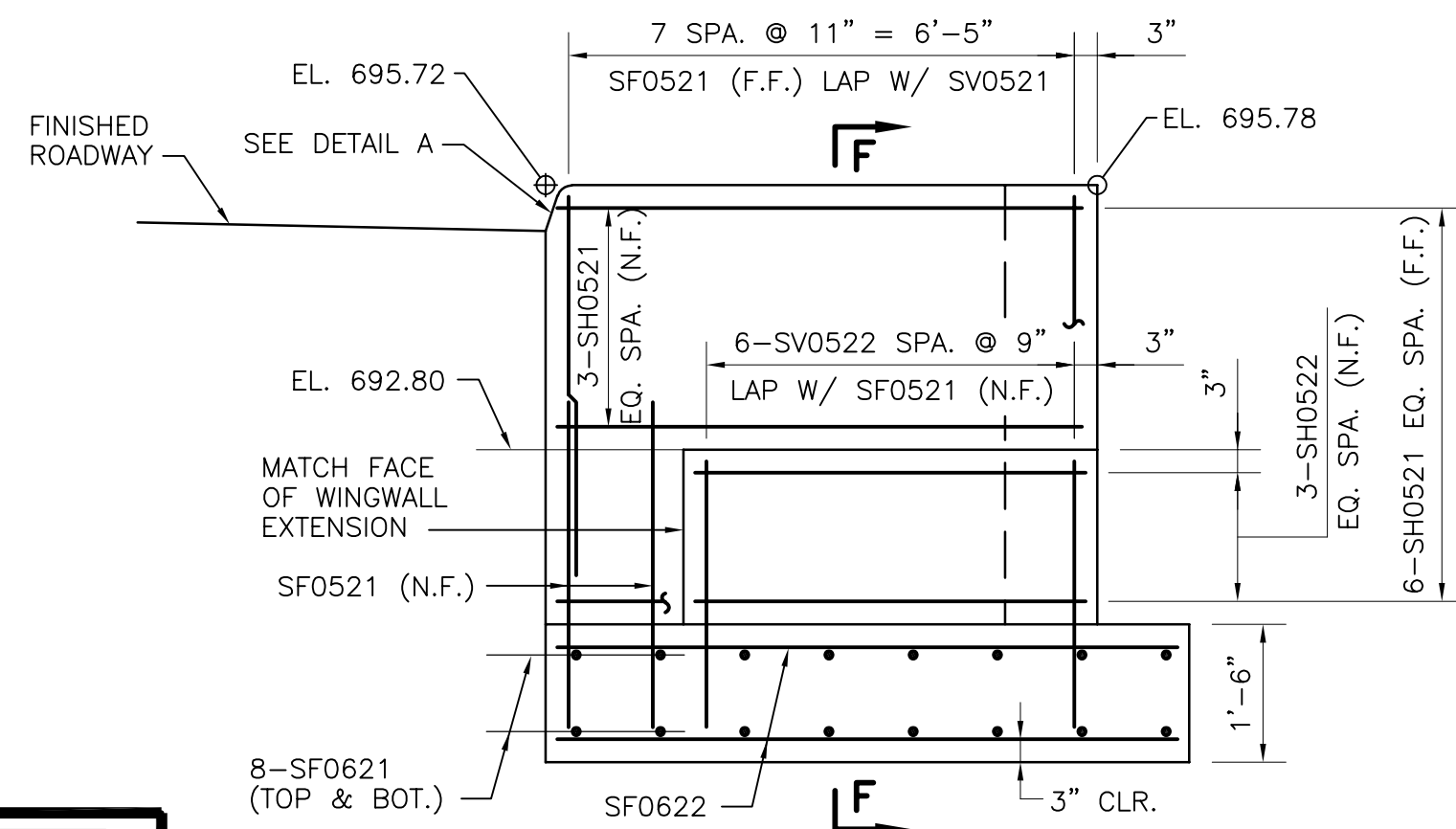
N.W. SIDEWALK ABUT. - PLAN

SCALE: 1/2" = 1'-0"



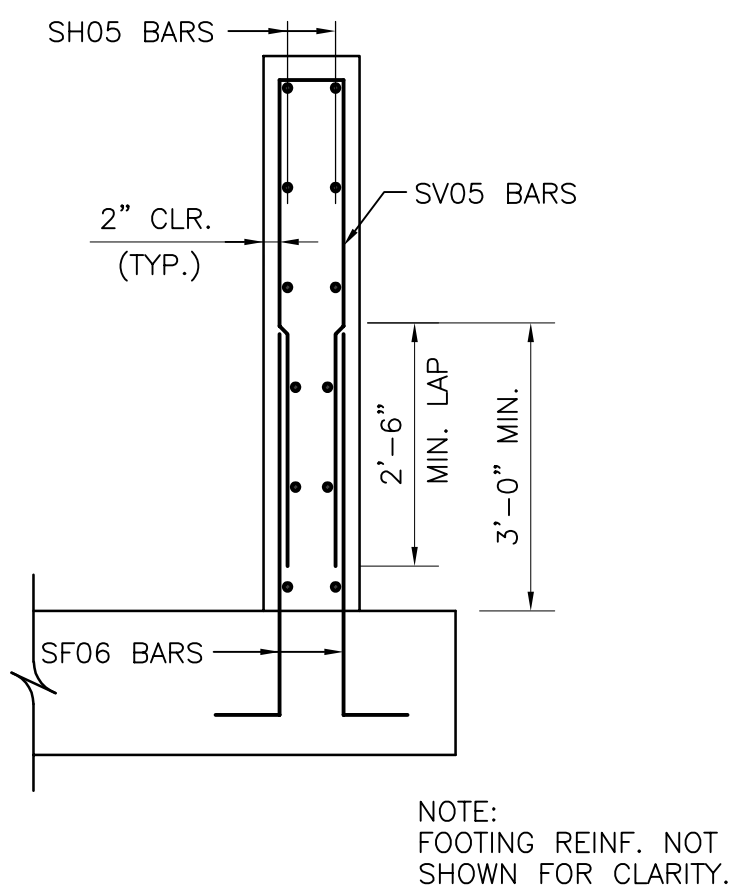
N.W. SIDEWALK ABUT. - ELEVATION A-A

SCALE: 1/2" = 1'-0"



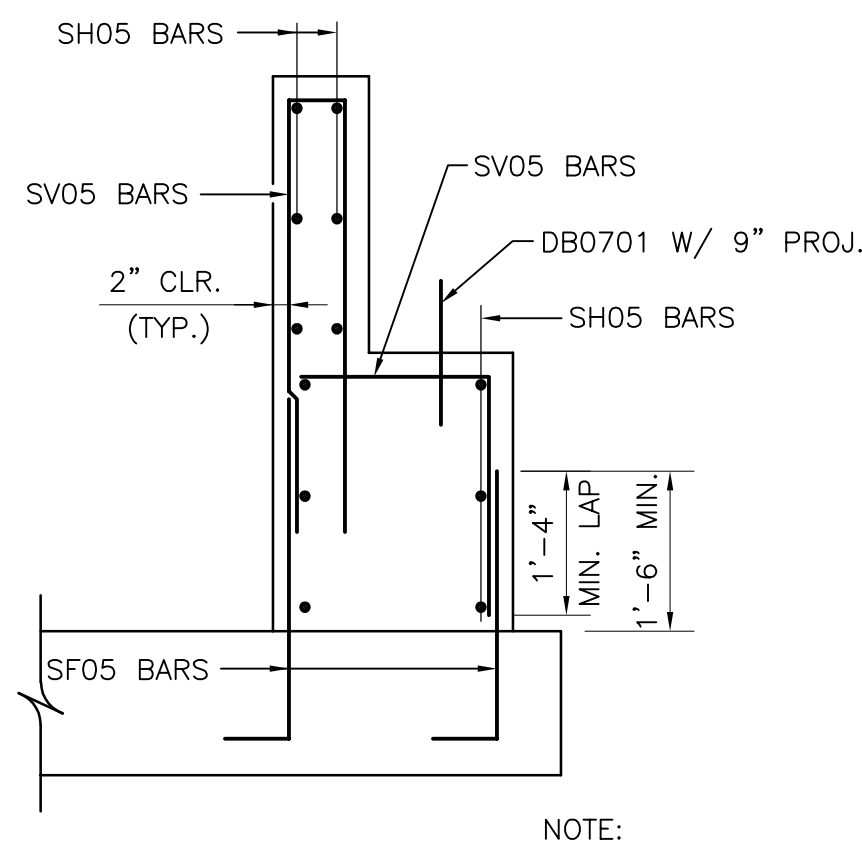
N.W. SIDEWALK ABUT. - ELEVATION B-B

SCALE: 1/2" = 1'-0"



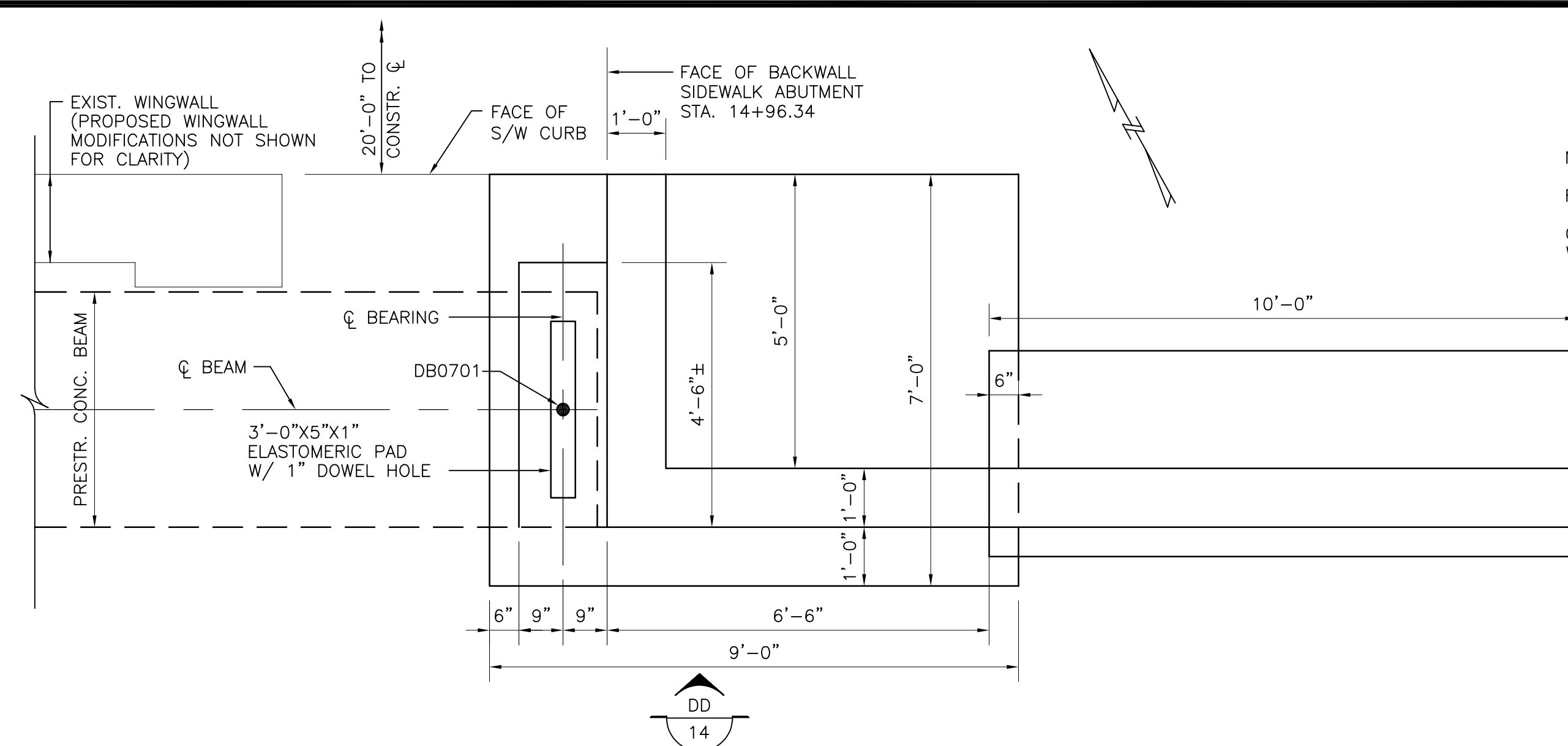
SECTION E-E

NOT TO SCALE



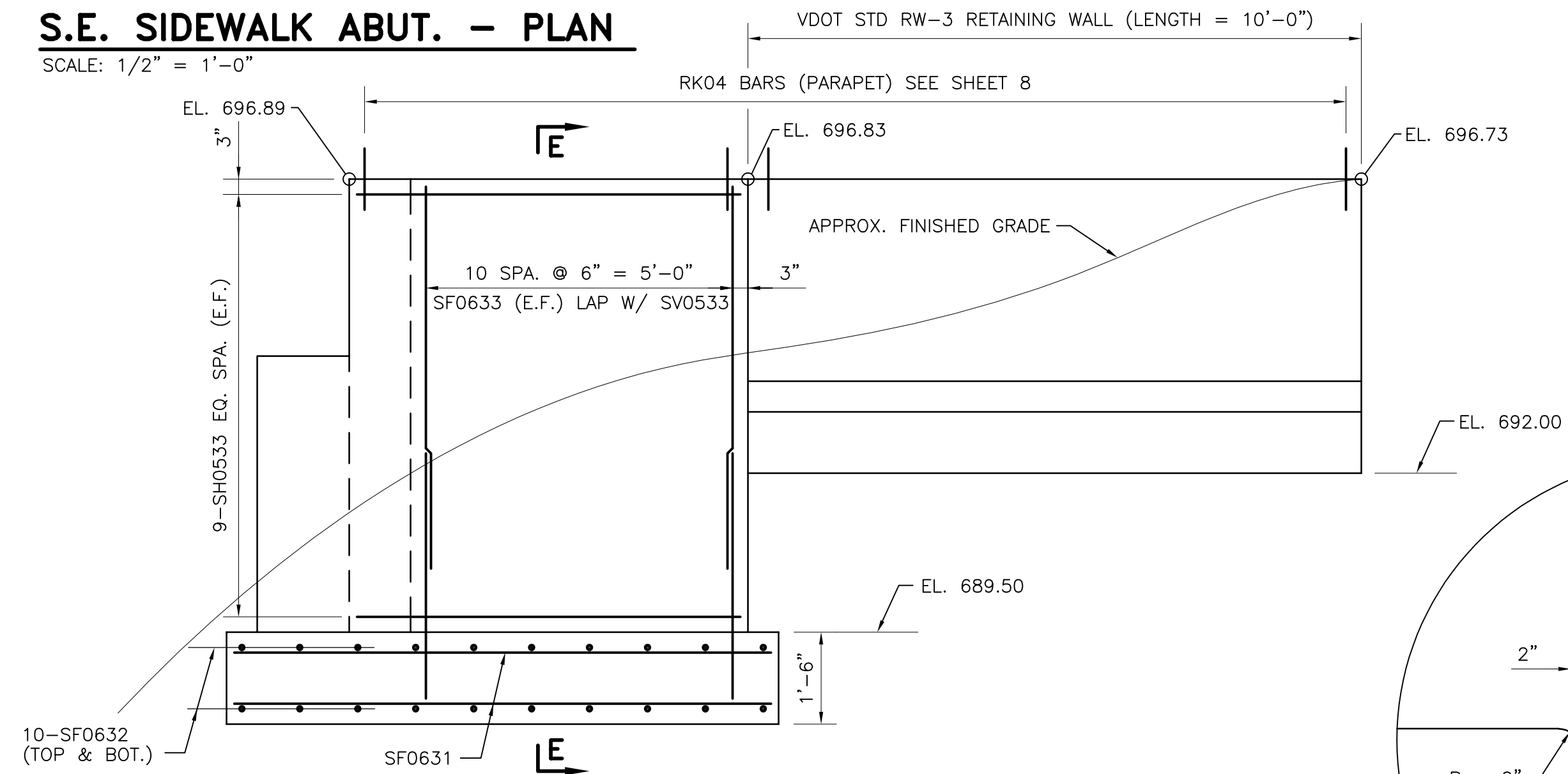
SECTION F-F

NOT TO SCALE



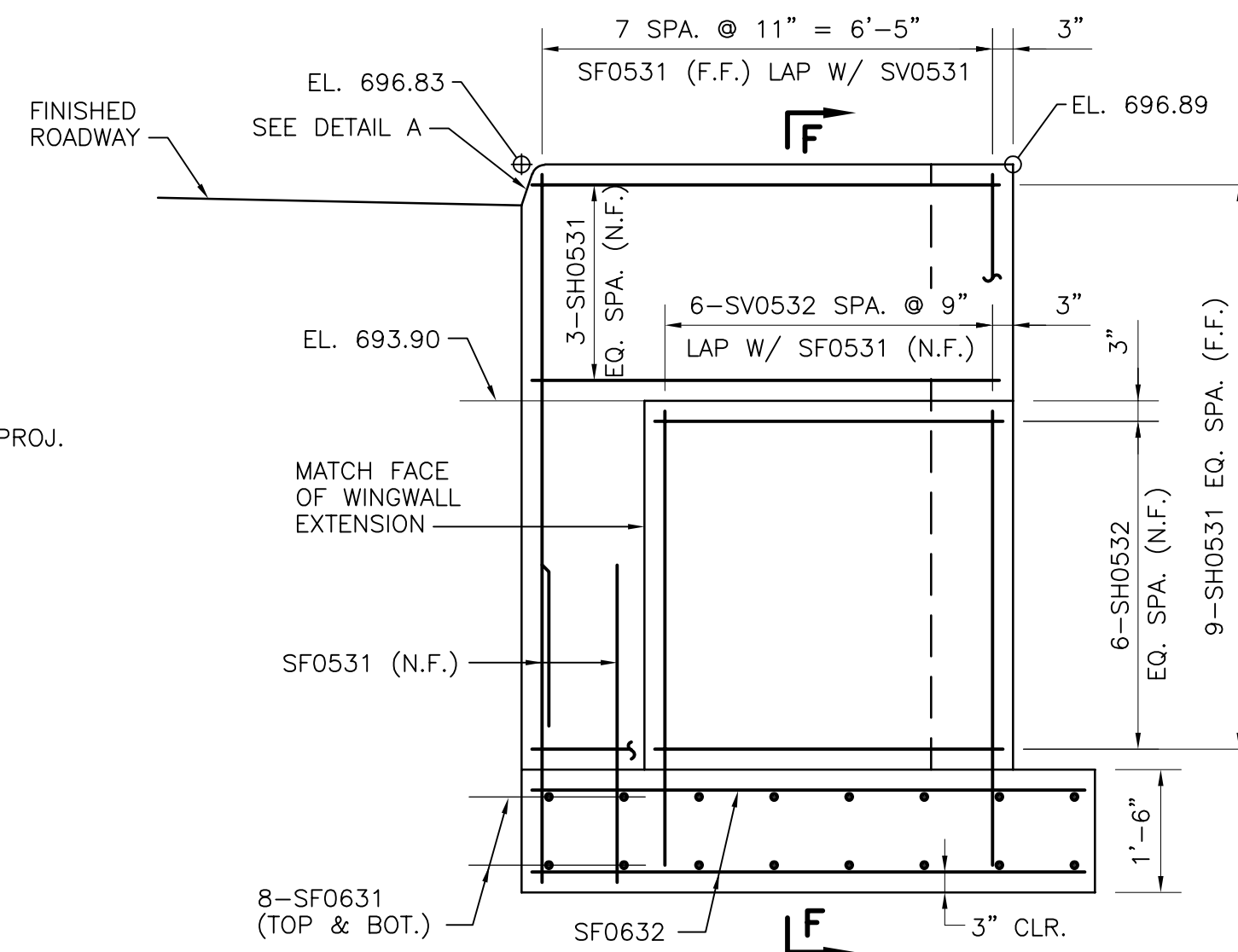
S.E. SIDEWALK ABUT. - PLAN

SCALE: 1/2" = 1'-0"



S.E. SIDEWALK ABUT. - ELEVATION D-D

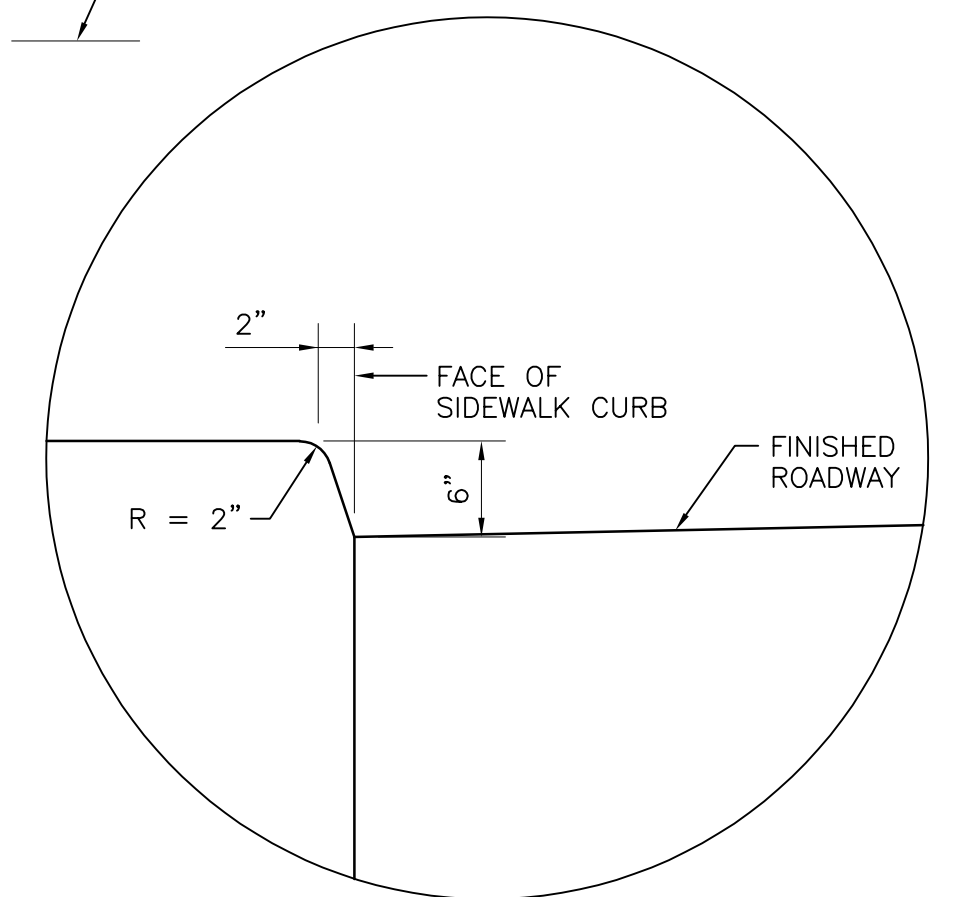
SCALE: 1/2" = 1'-0"



S.E. SIDEWALK ABUT. - ELEVATION C-C

SCALE: 1/2" = 1'-0"

NOTE:
FOR ABUTMENT WINGWALL DETAILS SEE SHEET 13.
QUANTITY OF VDOT RW-3 RETAINING WALL INCLUDED
WITH PAY ITEM CONCRETE, CLASS A3.



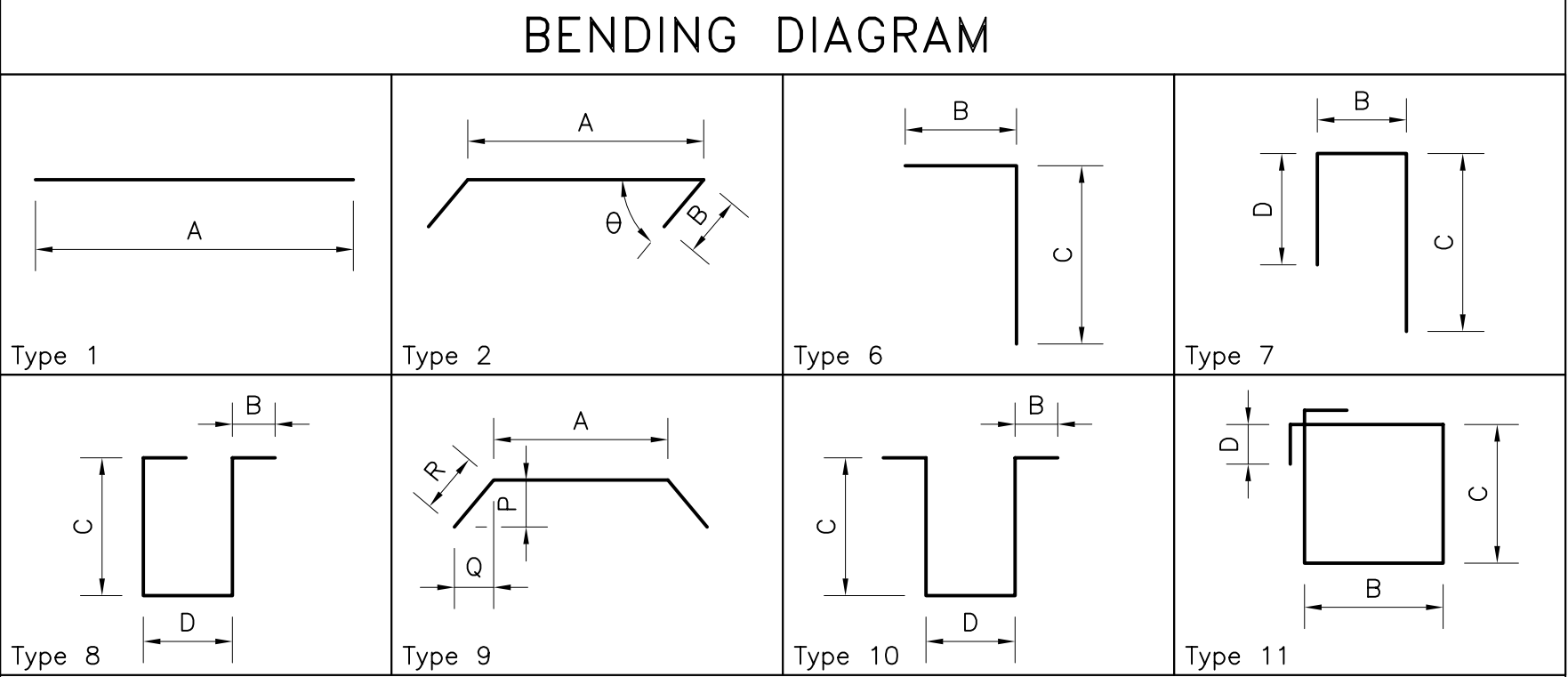
DETAIL A

SCALE: 1" = 1'

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REINFORCING STEEL SCHEDULE							DIMENSION TABLE													
MARK	NO.	BAR SIZE	PIN DIA. FT.-INCHES	LENGTH FT.-INCHES FT.-INCHES		WEIGHT (LBS.)	LOCATION	MARK	TYPE	A FT.-INCHES	B FT.-INCHES	C FT.-INCHES	D FT.-INCHES	E P FT.-INCHES	F Q FT.-INCHES	G R FT.-INCHES	H FT.-INCHES	I S FT.-INCHES	J T FT.-INCHES	θ DEGREES
SUPERSTRUCTURE — EPOXY COATED																				
BS0601 DV0501 SL0501	12 78 61	6 9 5	4 1/2 2 1/2	5-11 6-07 42-03	107 534 2688	BACKWALL & DIAPHRAGM DIAPHRAGM SLAB	BS0601 DV0501 SL0501	9 10 1	1-04 42-03	8	2-04	1-00	1-08	1-08	2-04					
SL0502 SC0501 SC0502	14 118 48	5 5 5		38-08 8-00 26-06	565 3261 1327	SLAB SLAB SLAB	SL0502 SC0501 SC0502	1 1 1	38-08 VARY 26-06											
ES0501 ES0502 ES0503	8 4 102	5 5 5	2 1/2	11-00 50-06 6-00	92 211 637	SLAB SLAB BACKWALL	ES0501 ES0502 ES0503	1 1 8	11-00 50-06	6	2-04	9								
ES0504 ES0601 SW0301	102 16 14	5 3 3	2 1/2 3 3/4	3-04 52-09 38-08	352 1264 204	BACKWALL BACKWALL SIDEWALK	ES0504 ES0601 SW0301	9 2 1	2-00 50-03 38-08	1-04			6	6	8 1/2				50	
SW0302	80	3		6-09	203	SIDEWALK	SW0302	1	6-09											
				SUBTOTAL	11445															
ABUTMENT A — PLAIN																				
AH0601 AH0602 AH0901	10 8 10	6 6 9	9	9-08 29-06 37-03	145 354 1266	ABUT. CAP ABUT. CAP ABUT. CAP	AH0601 AH0602 AH0901	1 1 6	9-08 29-06	2-00	35-06									
AS0402 AS0403 AS0404	110 20 33	4 4 4	2 2 2	8-07 4-04 4-00	630 58 88	ABUT. CAP ABUT. CAP ABUT. CAP	AS0402 AS0403 AS0404	7 7 7		3-01 1-02 1-02	2-10 1-08 1-06	2-10 1-08 1-06								
AS0501 DB0701 AH0501	20 2 8	5 7 5	2 1/2	11-07 1-06 8-00	241 6 67	ABUT. CAP ABUT. CAP SW WING	AS0501 DB0701 AH0501	11 1 1		1-06 8-00	3-01	2-06	5 5/8							
AH0502 AH0503 AH0504	8 20 30	5 5 5		9-07 15-00 17-00	80 313 532	NW WING SW WING NW WING	AH0502 AH0503 AH0504	1 1 1	9-07 15-00 17-00											
AV0501 AV0502 AV0503	142 21 36	5 5 5	2 1/2 2 1/2	4-00 14-03 4-05	592 311 165	SW & NW WING SW & NW WING SW WING	AV0501 AV0502 AV0503	1 7 6	4-00	1-07 1-00	6-05 3-06	6-05								
AV0506 AV0507 AV0508	62 6 4	5 5 5	2 1/2 2 1/2 2 1/2	3-07 14-08 11-06	230 91 48	NW WING SW & NW WING SW WING	AV0506 AV0507 AV0508	6 7 7		1-00 2-00 1-05	2-08 6-05 5-02	6-05 5-02								
AV0511	6	5	2 1/2	9-08	61	NW WING	AV0511	7		1-05	4-03	4-03								
				SUBTOTAL	5278															
ABUTMENT B — PLAIN																				
AH0601 AH0602 AH0901	10 8 10	6 6 9	9	9-08 29-06 37-03	145 354 1266	ABUT. CAP ABUT. CAP ABUT. CAP	AH0601 AH0602 AH0901	1 1 6	9-08 29-06	2-00	35-06									
AS0402 AS0403 AS0404	110 20 33	4 4 4	2 2 2	8-07 4-04 4-00	630 58 88	ABUT. CAP ABUT. CAP ABUT. CAP	AS0402 AS0403 AS0404	7 7 7		3-01 1-02 1-02	2-10 1-08 1-06	2-10 1-08 1-06								
AS0501 DB0701 AH0501	20 2 8	5 7 5	2 1/2	11-07 1-06 8-00	241 6 67	ABUT. CAP ABUT. CAP NE WING	AS0501 DB0701 AH0501	11 1 1		1-06 8-00	3-01	2-06	5 5/8							
AH0502 AH0503 AH0504	8 30 30	5 5 5		9-07 15-00 17-00	80 469 532	SE WING NE WING SE WING	AH0502 AH0503 AH0504	1 1 1	9-07 15-00 17-00											
AV0501 AV0502 AV0504	170 21 60	5 5 5	2 1/2 2 1/2	4-00 14-03 4-08	709 311 291	NE & SE WING NE & SE WING NE WING	AV0501 AV0502 AV0504	1 7 6	4-00	1-07 1-00	6-05 3-09	6-05								
AV0505 AV0507 AV0509	66 6 4	5 5 5	2 1/2 2 1/2 2 1/2	4-08 14-08 11-07	320 91 48	SE WING NE & SE WING NE WING	AV0505 AV0507 AV0509	6 7 7		1-00 2-00 1-05	3-09 6-05 5-02	6-05 5-02								
AV0510	6	5	2 1/2	14-11	93	SE WING	AV0510	7		1-05	6-10	6-10								
				SUBTOTAL	5800															

DIMENSION VARIATION TABLE									
MARK	NO. EA. LEN.	DIMEN- SION	FROM FT.-INCHES	TO FT.-INCHES	VARY BY FT.-INCHES	DIMEN- SION	FROM FT.-INCHES	TO FT.-INCHES	VARY BY FT.-INCHES
SC0501	2	A	8-00	45-00	7 1/2				



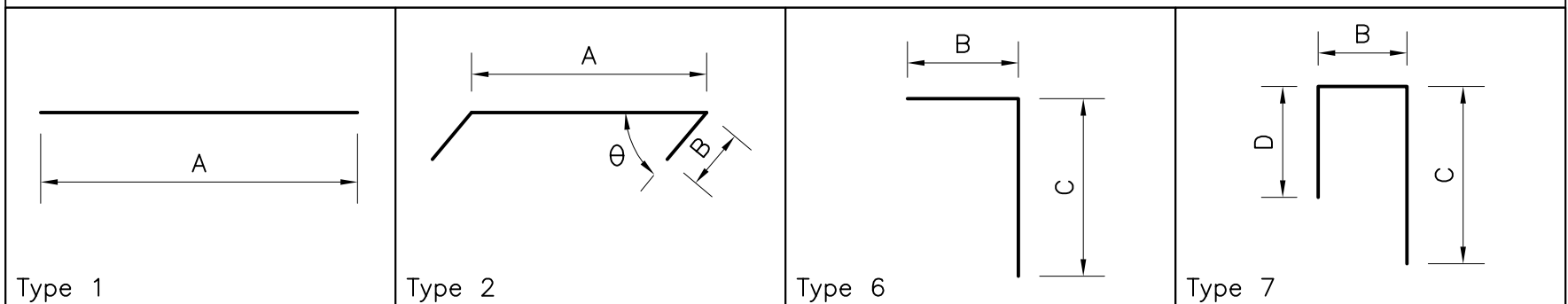
COMM. NO. 30089A

			THE CITY OF LYNCHBURG, VIRGINIA		
			DEPT. OF PUBLIC WORKS		
			ENGINEERING		
			BEDFORD AVE. BRIDGE OVER NS RWY		
			REINFORCING STEEL SCHEDULE		
			1 OF 2		
			DESIGNED BY: KSF	DRAWN BY: KSF	CHECKED BY: DRD
NO.	DESCRIPTION	DATE	SCALE: AS NOTED		PROJECT NO.: 03036-BR
REVISIONS			DATE: 14 JAN. 2005		SHEET: 16 OF 24

REINFORCING STEEL SCHEDULE										DIMENSION TABLE										
MARK	NO.	BAR SIZE	PIN DIA.	LENGTH		WEIGHT (LBS.)	LOCATION	MARK	TYPE	A	B	C	D	E P	F Q	G R	H	I S	J T	Θ
			FT.-INCHES	FT.-INCHES	FT.-INCHES					FT.-INCHES	FT.-INCHES	FT.-INCHES	FT.-INCHES	FT.-INCHES	FT.-INCHES	FT.-INCHES	DEGREES			
S.W. SIDEWALK ABUTMENT – PLAIN																				
SF0501 SF0601 SF0602	16 16 20	5 6 6	3 3/4	12-09 8-06 6-06	212 204 195	FOOTING FOOTING FOOTING	SF0501 SF0601 SF0602	6 1 1	8-06 6-06	2-10	10-00									
SF0603 SH0501 SH0502	22 10 4	6 5 5	4 1/2	5-03 5-08 4-00	171 59 17	FOOTING BACKWALL BEAM SEAT	SF0603 SH0501 SH0502	6 1 1	5-08 4-00	4-04	1-00									
SH0503 SV0501 SV0502	14 8 6	5 5 5	3 3/4 3 3/4	6-02 11-03 4-06	90 94 28	WING BACKWALL BEAM SEAT	SH0503 SV0501 SV0502	1 7 6	6-02 2-00	8 2-00	5-05 2-07	5-05								
SV0503 DB0701	11 1	5 7	3 3/4	10-09 1-06	123 2	WING BEAM SEAT	SV0503 DB0701	7 1	1-06	8 5-02	5-02									
				SUBTOTAL	1195															
N.E. SIDEWALK ABUTMENT – PLAIN																				
SF0511 SF0611 SF0612	16 16 20	5 6 6	3 3/4	12-09 8-06 6-06	212 204 195	FOOTING FOOTING FOOTING	SF0511 SF0611 SF0612	6 1 1	8-06 6-06	2-10	10-00									
SF0613 SH0511 SH0512	22 10 4	6 5 5	4 1/2	5-03 5-08 4-00	171 59 17	FOOTING BACKWALL BEAM SEAT	SF0613 SH0511 SH0512	6 1 1	5-08 4-00	4-04	1-00									
SH0513 SV0511 SV0512	14 8 6	5 5 5	3 3/4 3 3/4	6-02 11-01 4-05	90 92 27	WING BACKWALL BEAM SEAT	SH0513 SV0511 SV0512	1 7 6	6-02 2-00	8 2-00	5-04 2-06	5-04								
SV0513 DB0701	11 1	5 7	3 3/4	10-07 1-06	121 2	WING BEAM SEAT	SV0513 DB0701	7 1	1-06	8 5-01	5-01									
				SUBTOTAL	1190															
N.W. SIDEWALK ABUTMENT – PLAIN																				
SF0521 SF0621 SF0622	16 16 20	5 6 6	3 3/4	12-07 8-06 6-06	209 204 195	FOOTING FOOTING FOOTING	SF0521 SF0621 SF0622	6 1 1	8-06 6-06	2-08	10-00									
SF0623 SH0521 SH0522	22 9 3	6 5 5	4 1/2	5-03 5-08 4-00	171 53 13	FOOTING BACKWALL BEAM SEAT	SF0623 SH0521 SH0522	6 1 1	5-08 4-00	4-04	1-00									
SH0523 SV0521 SV0522	12 8 6	5 5 5	3 3/4 3 3/4	6-02 9-03 3-06	77 77 22	WING BACKWALL BEAM SEAT	SH0523 SV0521 SV0522	1 7 6	6-02 2-00	8 2-00	4-05 1-07	4-05								
SV0523 DB0701	11 1	5 7	3 3/4	8-09 1-06	100 2	WING BEAM SEAT	SV0523 DB0701	7 1	1-06	8 4-02	4-02									
				SUBTOTAL	1123															
S.E. SIDEWALK ABUTMENT – PLAIN																				
SF0531 SF0631 SF0632	16 16 20	5 6 6	3 3/4	12-09 8-06 6-06	212 204 195	FOOTING FOOTING FOOTING	SF0531 SF0631 SF0632	6 1 1	8-06 6-06	2-10	10-00									
SF0633 SH0531 SH0532	22 12 6	6 5 5	4 1/2	5-11 5-08 4-00	193 71 25	FOOTING BACKWALL BEAM SEAT	SF0633 SH0531 SH0532	6 1 1	5-08 4-00	5-00	1-00									
SH0533 SV0531 SV0532	18 8 6	5 5 5	3 3/4 3 3/4	6-02 14-05 6-01	116 120 38	WING BACKWALL BEAM SEAT	SH0533 SV0531 SV0532	1 7 6	6-02 2-00	8 2-00	7-00 4-02	7-00								
SV0533 DB0701	11 1	5 7	3 3/4	13-11 1-06	160 2	WING BEAM SEAT	SV0533 DB0701	7 1	1-06	8 6-09	6-09									
				SUBTOTAL	1336															

[illegible]

BENDING DIAGRAM

[illegible]

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TRAFFIC CONTROL PLAN
TEMPORARY DETOUR

NOT TO SCALE

LEGEND

- CHAIN LINK FENCE (6')
- [K] SIGN INSTALLATION & LEGEND DESIGNATION
- [Traffic Light Symbol] EXISTING SIGNALIZED INTERSECTION
- [Solid Line] PROPOSED DETOUR ROUTE

SIGN LEGEND

SIGN DESIGNATION	SIGN	MUTCD DESIGNATION	SIZE
A	ROAD WORK AHEAD	W21-4	48" x 48"
B	DETOUR AHEAD	W20-2	48" x 48"
C	DETOUR [Left Arrow]	M4-9L	30" x 24"
D	DETOUR [Right Arrow]	M4-9R	30" x 24"
E	DETOUR [Up Arrow]	M4-9	30" x 24"
F	BRIDGE CLOSED 90 FEET AHEAD LOCAL TRAFFIC ONLY	R11-3	60" x 30"
G	BRIDGE CLOSED 300 FEET AHEAD LOCAL TRAFFIC ONLY	R11-3	60" x 30"
H	END ROAD WORK	G20-2a	48" x 24"
I	BEDFORD AVE CLOSED FOLLOW MAGNOLIA ST DETOUR	SPECIAL	-----
J	BEDFORD AVE CLOSED FOLLOW BIRCH ST DETOUR	SPECIAL	-----
K	BRIDGE CLOSED	R11-2	48" x 30"
PRE- CONSTRUCTION SIGNAGE	BEDFORD AVE BRIDGE CLOSED BEGINNING MAR. 1, 2005 ENDING DEC. 1, 2005	SPECIAL	-----

SEE SHEET 19 FOR TRAFFIC CONTROL NOTES

HSM

TRANSPORTATION

COMM. NO. 30089A

THE CITY OF LYNCHBURG, VIRGINIA
DEPT. OF PUBLIC WORKS
ENGINEERING

BEDFORD AVE. BRIDGE OVER NS RWY

TRAFFIC CONTROL PLAN

DESIGNED BY: AKCB	DRAWN BY: KSF	CHECKED BY: GWB
NO.	DESCRIPTION	DATE
SCALE: AS NOTED		PROJECT NO.: 03036-BR
REVISIONS		DATE: 14 JAN. 2005
		SHEET: 18 OF 24

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GRADING

1. THE GRADE LINE DENOTES THE TOP OF FINISHED PAVEMENT UNLESS SHOWN OTHERWISE ON TYPICAL SECTIONS OR PLANS.
2. THE COST OF INCIDENTAL GRADING AT SIDEWALK ABUTMENTS AND REMOVAL OF ALL EXISTING CONCRETE ITEMS IN THE AREA TO BE GRADED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING, SHALL BE INCLUDED IN THE PRICE BID FOR CLEARING AND GRUBBING: SIDEWALK, CURB AND GUTTER, SMALL FOOTINGS AND SMALL BLOCK OR BRICK ITEMS.
3. THE SLOPE BETWEEN THE RAILROAD AND THE CONSTRUCTION ON CLEVELAND AVENUE SHALL BE CLEARED. ALL TREES ARE TO BE CUT OFF AT GROUND LEVEL AND THE AREA SEEDED AS SHOWN IN THESE PLANS. THIS WORK WILL NOT BE MEASURED FOR PAYMENT BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLEARING AND GRUBBING.
4. THE BORROW MATERIAL FOR THIS PROJECT SHALL BE A MINIMUM CBR 10 OR AS APPROVED BY THE ENGINEER.

DRAINAGE

1. THE LOCATIONS OF ALL DRAINAGE STRUCTURES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE "H" DIMENSIONS SHOWN ON THE PLANS FOR DROP INLETS ARE APPROXIMATE.
2. ALL STORM DRAIN PIPE ON THIS PROJECT SHALL BE CONCRETE. FOR STRENGTH OR CLASS DESIGNATION; AVAILABLE SIZES; HEIGHT OF COVER LIMITATIONS; AND METHOD OF BEDDING LIMITATIONS FOR A PARTICULAR HEIGHT OF COVER, SEE APPLICABLE VDOT ROAD AND BRIDGE STANDARDS PC-1 AND PB-1.
3. THE PIPE CONNECTED TO THE EXISTING DROP INLET LABELED "REMOVE EXISTING DROP INLET" SHALL BE LEFT IN PLACE, PLUGGED IN ACCORDANCE WITH VDOT STANDARD PP-1 AND BACKFILLED. PAYMENT WILL BE IN C.Y. OF FLOWABLE BACKFILL.

PAVEMENT

1. THE PAVEMENT MATERIALS LISTED BELOW WILL BE PAID FOR ON A TONNAGE BASIS. THE WEIGHT WILL VARY IN ACCORDANCE WITH THE SPECIFIC GRAVITY OF THE AGGREGATES AND THE ASPHALTIC CONTENT OF THE MIX ACTUALLY USED TO SECURE THE DESIGN DEPTH. THE WEIGHT OF THE ASPHALT CONCRETE IS BASED ON 95% OF THEORETICAL DENSITY.
ASPHALT CONCRETE TYPE SM 12.5D @ 113 LBS. PER S.Y. PER INCH OF DEPTH
ASPHALT CONCRETE TYPE BM 25 @ 113 LBS. PER S.Y. PER INCH OF DEPTH
AGGREGATE BASE MATERIAL TYPE I SIZE 21 OR 21A @ 150 LBS. PER C.F. (PLUS 6% MOISTURE CORRECTION)
2. THE EXISTING ASPHALT PARKING AREA ON PARCEL 566-31-254 SHALL BE RE-SURFACED WITH 3" ASPHALT CONCRETE SM - 9.5A AS DIRECTED BY THE ENGINEER.

INCIDENTALS

1. SALVAGED GUARD RAIL MATERIALS NOT USED IN THE NEW CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A LICENSED LANDFILL, RECYCLED OR BE RETAINED BY THE CONTRACTOR.
2. ALL GUARD RAIL TERMINALS SHALL INCLUDE A STANDARD W- BEAM END SECTION (ROUNDED).
3. ALL EXISTING MANHOLES AND WATER VALVE BOXES WITHIN THE LIMITS OF THE PROJECT THAT ARE TO REMAIN, ARE TO BE ADJUSTED TO THE NEW GRADE IN ACCORDANCE WITH CITY STANDARDS.
4. THE GUTTER PAN ACROSS THE CITY STANDARD COMMERCIAL DRIVEWAY ENTRANCES (#25.12) IS NOT REQUIRED ON THIS PROJECT.
5. THE ROADWAY PORTION OF THE 12" WATER LINE AND APPURTENANCES WILL BE PAID FOR ON A LUMP SUM BASIS. THE PRICE BID SHALL INCLUDE FURNISHING ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO PIPE, FITTINGS, VALVES, VALVE BOXES, TESTING, DISINFECTING AND CONNECTING TO THE EXISTING SYSTEM, ALL IN ACCORDANCE WITH CITY SPECIFICATIONS.

EROSION AND SEDIMENT CONTROL

1. THE TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS SHOWN ON THE PLANS ARE INTENDED TO PROVIDE A GENERAL PLAN FOR CONTROLLING EROSION AND SILTATION WITHIN THE PROJECT LIMITS. THE E&S CONTROL PLAN IS BASED ON FIELD CONDITIONS AT THE TIME OF PLAN DEVELOPMENT AND AN ASSUMED SEQUENCE OF CONSTRUCTION. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL ADJUST THE LOCATION, QUANTITY AND TYPE OF EROSION AND SILTATION CONTROL ITEMS REQUIRED BASED ON THE ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION AND THE SELECTED SEQUENCE OF CONSTRUCTION.
2. THE AREAS BEYOND THE PROJECT'S CONSTRUCTION AREA ARE TO BE PROTECTED FROM SILTATION. PERIMETER CONTROLS SUCH AS FILTER BARRIER, SILT FENCE, DIVERSION DIKES, TURBIDITY CURTAINS, ETC. SHALL BE INSTALLED PRIOR TO ANY GRUBBING OR OTHER EARTH MOVING ACTIVITIES.
3. SILT REMOVAL AND SEDIMENT CLEAN-OUT FROM EROSION AND SILTATION CONTROL ITEMS SHALL BE PERFORMED WHEN THE CAPACITY, HEIGHT OR DEPTH HAS BEEN REDUCED BY 50%.

TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL COVER ANY EXISTING SIGNS WHICH CONFLICT WITH MAINTENANCE OF TRAFFIC SIGNAGE. THE EXISTING SIGNS SHOULD BE UNCOVERED AT THE COMPLETION OF THE CONSTRUCTION PERIOD.
2. CONSTRUCTION SIGNAGE SHALL CONFORM TO THE VIRGINIA WORK AREA PROTECTION MANUAL, JANUARY 2003 EDITION. TEMPORARY SIGNS WILL BE FURNISHED BY THE CITY AND INSTALLED BY THE CONTRACTOR. PERMANENT SIGNS WILL BE FURNISHED AND INSTALLED BY THE CITY.
3. CONSTRUCTION SIGNS SHALL BE LOCATED AS DEPICTED ON THE CONSTRUCTION PLANS OR AS DIRECTED BY THE ENGINEER.
4. ALL SIGNS, DRUMS AND OTHER DEVICES USED IN THE CONSTRUCTION ZONE SHALL BE KEPT CLEAN AND PROPERLY ALIGNED AT ALL TIMES.
5. ACCESS TO ENTRANCES AND SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES.
6. THE CITY WILL INSTALL PERMANENT PAVEMENT MARKINGS, AND FURNISH AND INSTALL THE LOOP DETECTORS UPON THE COMPLETION OF CONSTRUCTION.
7. SHORT-TERM INTERSECTION OR LANE CLOSURES SHALL BE CONDUCTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL, JANUARY 2003 EDITION.
8. ALL SIGNAGE SHALL BE DIAMOND GRADE FLUORESCENT PRISMATIC LENS SHEETING.
9. THE CONTRACTOR SHALL PROVIDE TWO VARIABLE MESSAGE BOARDS FOR A TWO WEEK PERIOD AT THE BEGINNING OF PROJECT CONSTRUCTION. THE CONTRACTOR SHALL PLACE EACH SIGN ONE WEEK PRIOR TO THE START OF CONSTRUCTION AND EACH SIGN SHALL BE LEFT IN PLACE FOR ONE WEEK AFTER THE START OF CONSTRUCTION. THE LOCATIONS AND MESSAGE TEXT FOR EACH MESSAGE BOARD WILL BE DETERMINED BY THE CITY.
10. TRAFFIC CONTROL WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE. THE PRICE BID FOR TRAFFIC CONTROL WILL BE FULL COMPENSATION FOR PERFORMING ALL ITEMS OF WORKS ASSOCIATED WITH THE SAFE MAINTENANCE OF TRAFFIC IN THE PROJECT AREA AND SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS REQUIRED FOR THE SAFE MAINTENANCE OF TRAFFIC.
11. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONE WEEK PRIOR TO THE START OF PROJECT CONSTRUCTION TO ALLOW FOR THE RETIMING OF ADJACENT TRAFFIC SIGNALS AS DESIRED BY THE CITY. THE CITY WILL PERFORM ALL SIGNAL TIMING MODIFICATIONS.

QUANTITY SUMMARY

Item	Unit	Quantity
⊗ Clearing and Grubbing	LS	1
Borrow Excavation	CY	2458
Traffic Maintenance	LS	1
Aggregate Base Material, Type I, No. 21 or 21A	TON	492
Asphalt Concrete Surface Course Type SM-12.5D	TON	155.2
Asphalt Concrete Base Course Type BM-25.0	TON	276.8
Asphalt Concrete Surface Course Type SM-9.5A	TON	47.1
Drop Inlet VDOT Std. DI 3B, L=4'	EA	3
15 inch Conc. Pipe	LF	152
Conn. To Exist. MH	EA	2
Guardrail GR-2	LF	75
Radial Guardrail GR-2	LF	15
Fixed Object Attachment GR-FOA-I Type II	EA	4
Remove Existing Guardrail	LF	135
⊗ Demolition of Pavement (Flexible)	SY	409
Saw Cut Asphalt Pavement (2")	LF	120
⊗ City Std Curb and Gutter	LF	70
⊗ City Std. Facedown Sidewalk	SY	144.8
⊗ City Std. Commercial Driveway Entrance (7")	SY	61.8
Remove Existing Drop Inlet	EA	1
Flowable Backfill	CY	3
Adjust Existing Sanitary Manhole	EA	2
Water Line (Roadway)	LS	1
Drop Inlet Silt Trap	EA	3
Temporary Silt Fence	LF	250
Silt Control Excavation	CY	42

⊗ Denotes items to be paid for on basis of plan quantities in accordance with the specifications

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COMM. NO. 30089A

THE CITY OF LYNCHBURG, VIRGINIA



DEPT. OF PUBLIC WORKS

ENGINEERING

BEDFORD AVE. BRIDGE OVER NS RWY

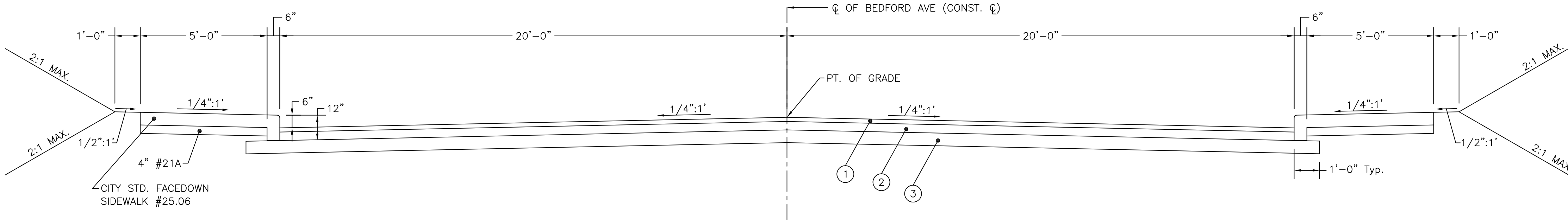
ROADWAY GENERAL NOTES
AND QUANTITY SUMMARY

DESIGNED BY: GWB | DRAWN BY: KSF | CHECKED BY: GWB

NO. DESCRIPTION DATE SCALE: AS NOTED PROJECT NO.: 03036-BR

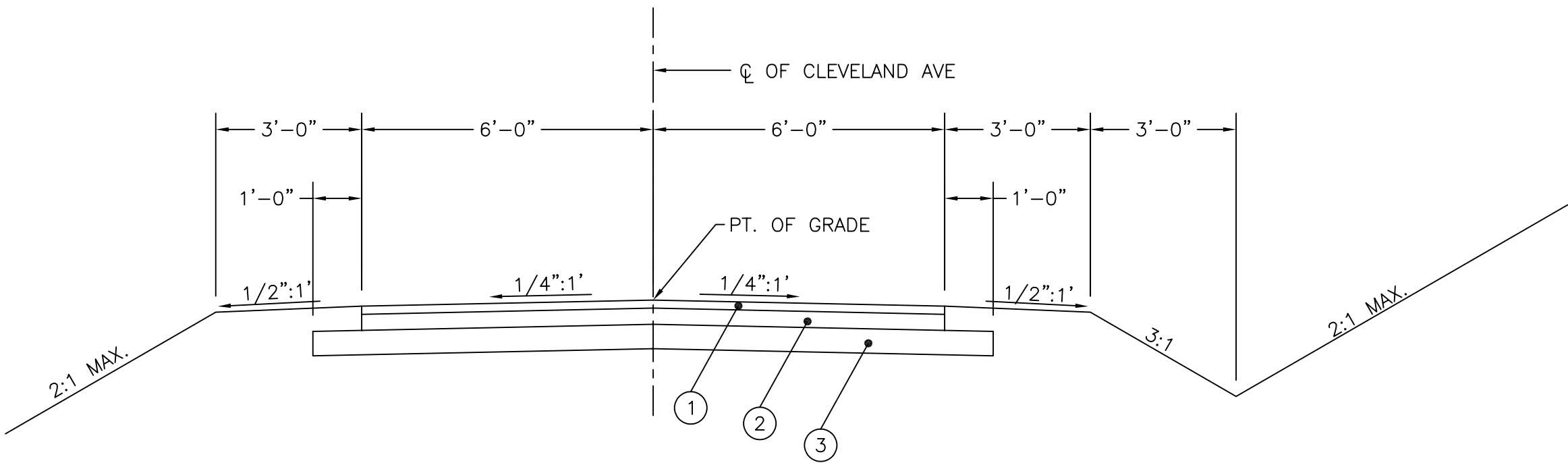
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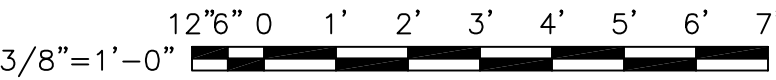
TYPICAL SECTION
BEDFORD AVENUE

- Legend
- ① 2" Asphalt Conc. SM 12.5D
 - ② 4" Asphalt Conc. BM 25.0
 - ③ 6" Type I Aggregate #21 or #21A



TYPICAL SECTION
CLEVELAND AVENUE

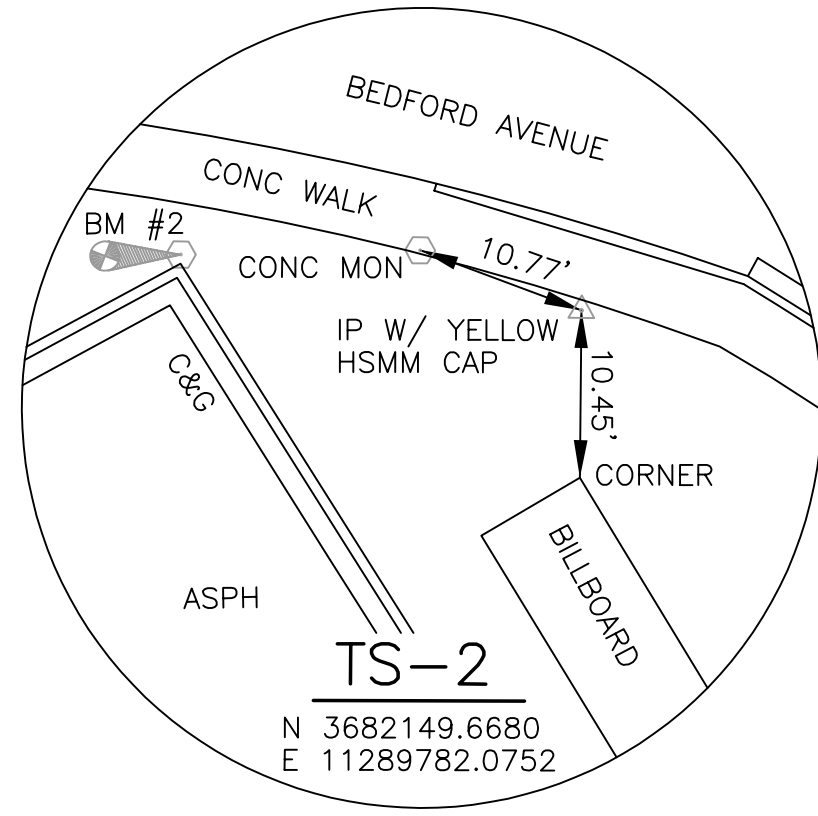
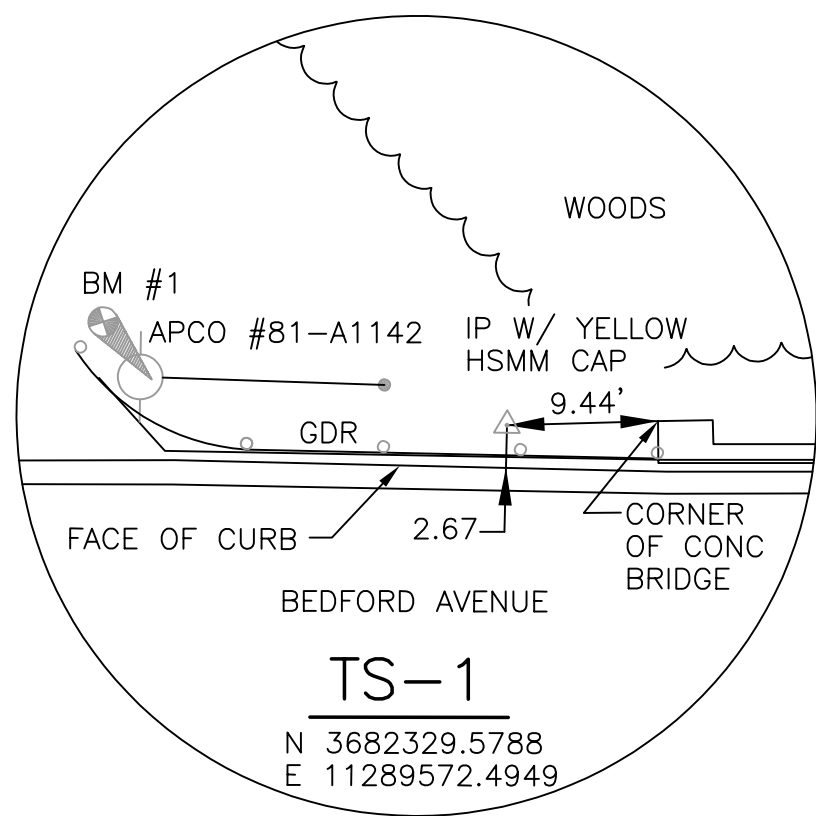
GRAPHIC SCALES



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TRANSPORTATION
COMM. NO. 30089A

			THE CITY OF LYNCHBURG, VIRGINIA		
			DEPT. OF PUBLIC WORKS		
			ENGINEERING		
			BEDFORD AVE. BRIDGE OVER NS RWY		
			TYPICAL SECTION & DETAILS		
			DESIGNED BY: GWB	DRAWN BY: KSF	CHECKED BY: GWB
NO.	DESCRIPTION	DATE	SCALE: AS NOTED	PROJECT NO.: 03036-BR	
REVISIONS			DATE: 14 JAN. 2005	SHEET: 20 OF 24	

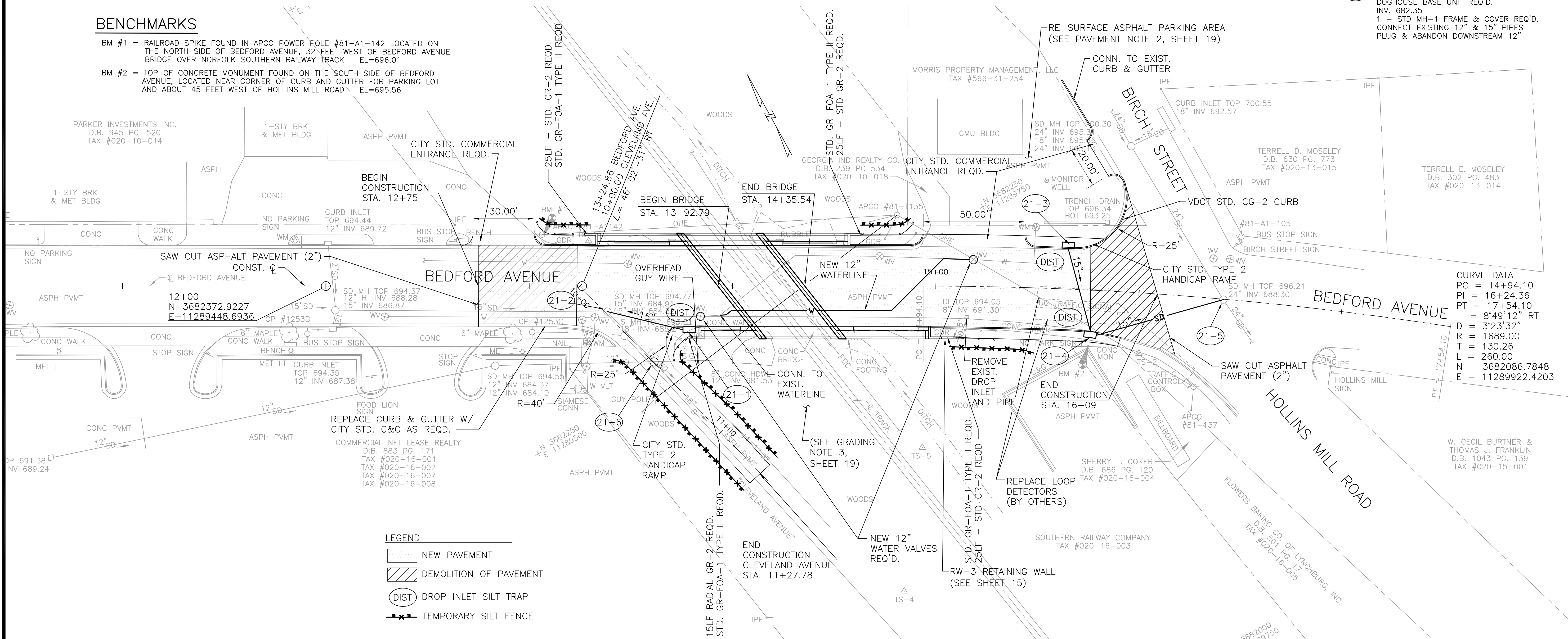
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BENCHMARKS

BM #1 = RAILROAD SPIKE FOUND IN APCO POWER POLE #81-A1-142 LOCATED ON THE NORTH SIDE OF BEDFORD AVENUE, 32' FEET WEST OF BEDFORD AVENUE BRIDGE OVER NORFOLK SOUTHERN RAILWAY TRACK EL=696.01

BM #2 = TOP OF CONCRETE MONUMENT FOUND ON THE SOUTH SIDE OF BEDFORD AVENUE, LOCATED NEAR CORNER OF CURB AND GUTTER FOR PARKING LOT AND ABOUT 45 FEET WEST OF HOLLINS MILL ROAD EL=695.56

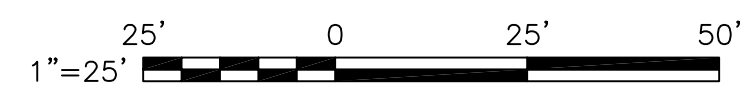


LEGEND

- NEW PAVEMENT
- DEMOLITION OF PAVEMENT
- (DIST) DROP INLET SILT TRAP
- TEMPORARY SILT FENCE

PLAN

GRAPHIC SCALES



DRAINAGE DESCRIPTIONS

- (21-1) 1 STD. DI-3B REQ'D. L=4'
H = 3.92 INV. 692.72
- (21-2) CONNECT 15 INCH CONC. PIPE TO EXISTING MANHOLE
- (21-3) 40LF - 15 INCH CONC. PIPE REQ'D. (8.5 FT. COVER)
INV. IN 692.72 INV. OUT 685.10
- (21-4) 1 STD. DI-3B REQ'D. L=4'
H = 4.31 INV. 691.76
- (21-5) 44LF - 15 INCH CONC. PIPE REQ'D. (2.6 FT. COVER)
INV. IN 692.20 INV. OUT 691.76
- (21-6) CONNECT 15 INCH CONC. PIPE TO EXISTING MANHOLE
- (21-7) 68LF - 15 INCH CONC. PIPE REQ'D. (5.9 FT. COVER)
INV. IN 691.76 INV. OUT 689.05
- (21-8) 11.6VF STD MH-2 REQ'D.
DOCHOUSE BASE UNIT REQ'D.
INV. 682.35
- (21-9) 1 - STD MH-1 FRAME & COVER REQ'D.
CONNECT EXISTING 12" & 15" PIPES
PLUG & ABANDON DOWNSTREAM 12"

CURVE DATA
PC = 14+94.10
PI = 16+24.36
PT = 17+54.10
= 8'49'12" RT
D = 3'23'32"
R = 1689.00
T = 130.26
L = 260.00
N = 3682086.7848
E = 11289922.4203

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THE CITY OF LYNCHBURG, VIRGINIA
DEPT. OF PUBLIC WORKS

ENGINEERING

BEDFORD AVE. BRIDGE OVER NS RWY

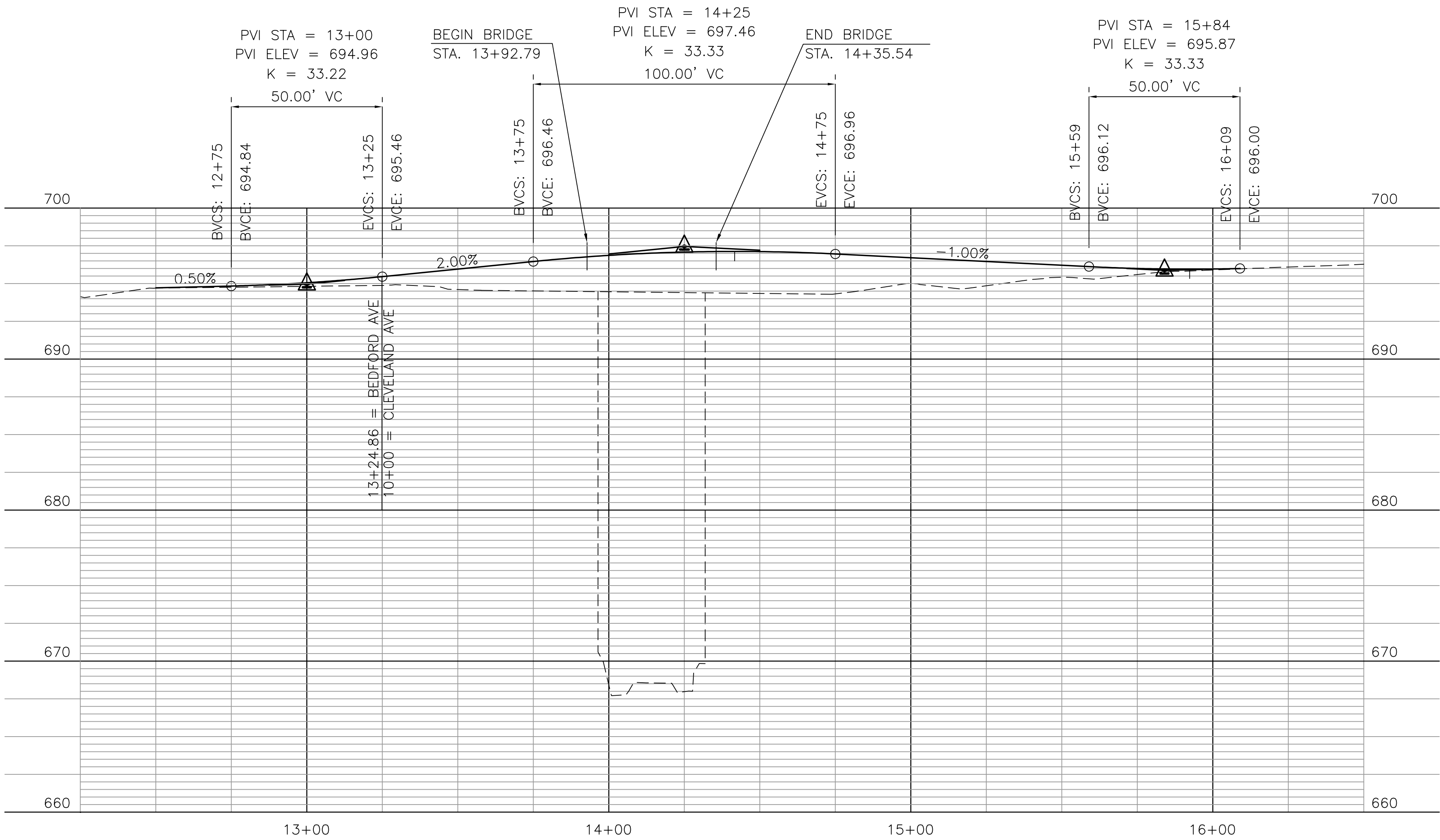
ROAD PLAN

DESIGNED BY: GWB DRAWN BY: KSF CHECKED BY: GWB

NO. DESCRIPTION DATE SCALE: AS NOTED PROJECT NO.: 03036-BR

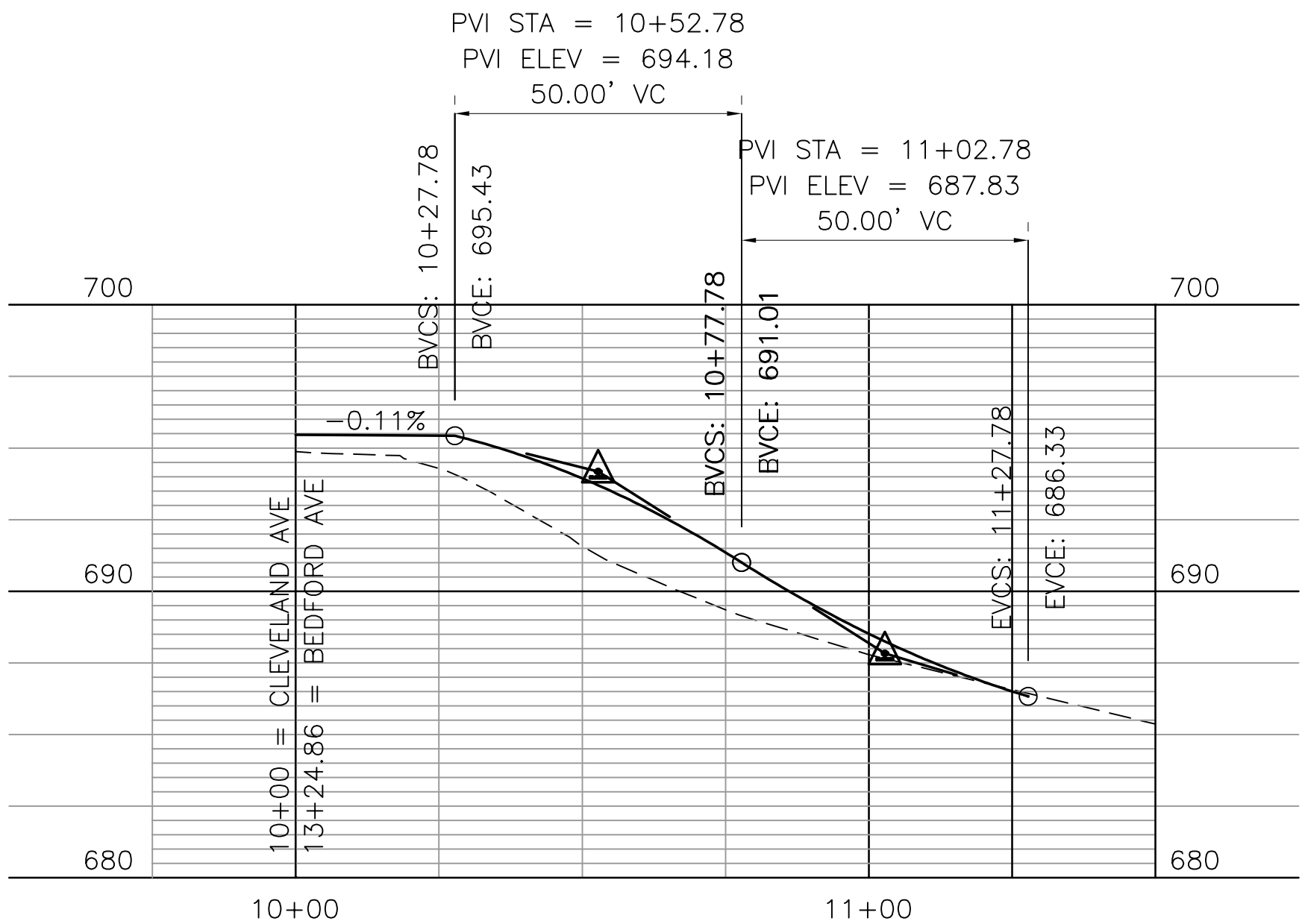
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BEDFORD AVE. PROFILE

SCALE: HORIZ. 1"=25' VERT. 1"=5'



CLEVELAND AVE. PROFILE

SCALE: HORIZ. 1"=25' VERT. 1"=5'

ROADSIDE DEVELOPMENT

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF LYNCHBURG

NOTES

APPROXIMATELY 0.04 ACRES WILL BE DISTURBED ON THIS PROJECT AND WILL REQUIRE THE ESTABLISHMENT OF GRASSES AND/OR LEGUMES.

★ NOTES FOR FIELD USE ONLY

OVERSEEDING RATES SHALL BE 100 PERCENT OF THE SEED MIXTURE SUPPLIED WITHOUT FERTILIZER.

THE ENGINEER WILL REQUIRE THE CONTRACTOR TO PERFORM SUPPLEMENTAL SEEDING WHEN LESS THAN 75 PERCENT UNIFORM STAND OF THE PERMANENT GRASS SPECIFIED IN THE MIXTURES IS OBTAINED. (ANNUAL SPECIES SUCH AS, RYE AND MILLET ARE TEMPORARY VARIETIES AND REQUIRE SUPPLEMENTAL SEEDING.)

NOTES APPLY TO SCHEDULE

LEGUME SEED MIXES (BIRDSFOOT TREFOIL, CROWNVELTCH, AND SERICEA LESPEDEZA) AND WEEPING LOVEGRASS SHALL NOT BE USED ON SHOULDERS AND OTHER LOCATIONS FLATTER THAN 3:1 SLOPE.

LEGUME SEED SHALL BE INOCULATED WITH THE APPROPRIATE STRAIN AND RATE OF BACTERIA. FOR HYDROSEEDING, USE FIVE TIMES THE DRY SEEDING RATE OF INOCULANT.

A TEMPORARY MIX OR EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ONLY ON AREAS THAT ARE TO BE REGRADED OR LATER DISTURBED, IF LEFT DORMANT FOR MORE THAN 15 DAYS.

TYPE I EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ON AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 15 DAYS BETWEEN DECEMBER 1 AND FEBRUARY 28.

SPRING & SUMMER AND FALL & WINTER DEFINED FOR THE PURPOSE OF DETERMINING WHETHER HULLED OR UNHULLED BERMUDAGRASS AND SERICEA LESPEDEZA SEED IS REQUIRED:

SPRING & SUMMER 4/1 – 9/15 – USE HULLED SEED
FALL & WINTER 9/15 – 4/1 – USE UNHULLED SEED

TYPE I MULCH (STRAW) TO BE USED ON NEWLY SEEDED AREAS ADJACENT TO ALL WATERWAYS, WETLANDS, SWAMPS, OR ANY AREA IN WHICH DRAINAGE FLOWS TOWARD AREAS UNDER THE JURISDICTION OF THE ENVIRONMENTAL REGULATORY AGENCIES.

TYPE I MULCH SHALL BE APPLIED AT 2 TONS PER ACRE TO PROVIDE 90 PERCENT COVERAGE.

TYPE I MULCH SHALL BE TACKED WITH FIBER MULCH AT THE RATE OF 750 LBS. PER ACRE AND/OR MULCH TACKIFIER.

TYPE II MULCH (FIBER MULCH) MAY BE SUBSTITUTED FOR TYPE I MULCH AT THE RECOMMENDATION OF THE DISTRICT ENVIRONMENTAL MANAGER.

TYPE II MULCH SHALL BE APPLIED AT A RATE OF 1500 LBS. (NET DRY WEIGHT) PER ACRE TO PROVIDE A MINIMUM OF 90 PERCENT COVERAGE, AND SHALL BE APPLIED IN A SEPARATE APPLICATION.

EROSION CONTROL MULCH, AS LISTED ON THE VDOT APPROVED PRODUCTS LIST, SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURES' RECOMMENDATIONS.

EROSION CONTROL MULCH SHALL PROVIDE 100 PERCENT COVERAGE OF ALL DENUDED AREAS.

ALL TOPSOIL IS TO BE FREE OF HARD LUMPS, CLODS, ROCKS AND FOREIGN DEBRIS AND IS TO BE HAND RAKED TO TIE INTO EXISTING LAWNs.

ALL SEED MUST BE IN CONFORMANCE WITH VDOT SEED SPECIFICATIONS FOR GRASSES & LEGUMES AND BE PROVIDED AT THE PROJECT SITE IN BAGS NOT OPENED AND LABLED FOR USE ON VDOT PROJECTS WITH A GREEN TAG CERTIFYING INSPECTION BY THE VIRGINIA CROP IMPROVEMENT ASSOCIATION.

MIX REQUIREMENTS THIS PROJECT

RECOMMENDATIONS FOR THE APPLICATION OF SEED MIXTURES (CORE MIX AND ADDITIVES), FERTILIZER, LIME, ETC. ARE TO BE OBTAINED FROM THE CITY OF LYNCHBURG.

CORE MIX

MIX	LBS./ACRES	DESCRIPTION
1	▲	✕ 100% CERTIFIED FINE FESCUE
2	▲	100% CERTIFIED TALL FESCUE
3	▲	50% CERTIFIED TALL FESCUE ✕ 50% CERTIFIED FINE FESCUE
4	▲	50% ORCHARDGRASS 50% CERTIFIED KENTUCKY BLUEGRASS
5	▲	100% BERMUDAGRASS
TEMPORARY		
3/1 – 5/16 and 8/16 – 3/1	50 50	50% CERTIFIED TALL FESCUE 50% BARLEY, WINTER RYE OR WINTER WHEAT
5/16 – 8/16	50 50	50% FOXTAIL MILLET 50% CERTIFIED TALL FESCUE

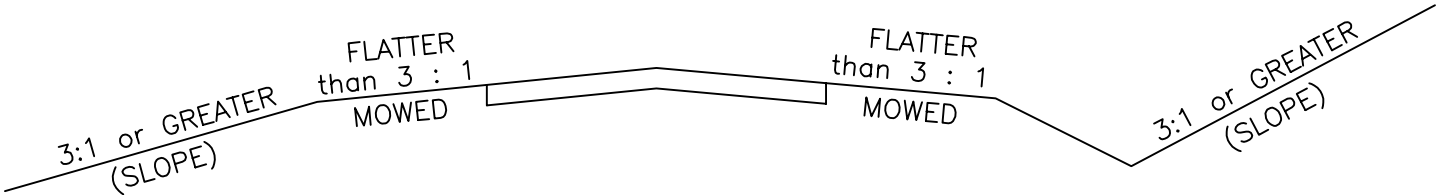
▲ ALL RATES TO BE SPECIFIED BY THE CITY OF LYNCHBURG

✕ FINE FESCUES INCLUDE CHEWINGS, CREEPING RED,
HARD, SHEEP

ADDITIVES

TYPE	LBS./ACRES	DESCRIPTION
A	▲	100% LOVEGRASS
B	▲	100% BARLEY, WINTER RYE OR WINTER WHEAT
C	▲	100% FOXTAIL MILLET
D	▲	100% ANNUAL RYEGRASS
E	▲	100% CROWNVELTCH (LEGUME)
F	▲	100% SERICEA LESPEDEZA (LEGUME)
G	▲	100% BIRDSFOOT TREFOIL (LEGUME)
H	▲	
I	▲	
J	▲	
K	▲	

SECTION OF SEED LOCATIONS



SEEDING SCHEDULE

	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE
	SPRING MONTH & DATE 4/1 – 6/1	SUMMER MONTH & DATE 6/1 – 9/15	FALL & WINTER MONTH & DATE 9/15 – 4/1			
PROJECT NUMBERS --- ---	---	---	---	---	---	---
✕ SPECIFY KIND OF FINE FESCUE	HARD/ CHEWINGS	HARD/ CHEWINGS	HARD/ CHEWINGS	HARD/ CHEWINGS	HARD/ CHEWINGS	HARD/ CHEWINGS

ROADSIDE DEVELOPMENT SUMMARY

PROJECT NUMBERS	⊗ TOPSOIL 2" CLASS A	REGULAR SEED	OVER SEEDING	LIME	FERT. 15–30–15	LEGUME SEED	LEGUME OVERSEEDING	TEMPORARY SEEDING
	ACRES	LBS.	LBS.	TONS	TONS	LBS.	LBS.	LBS.
--- ---	---	---	---	---	---	--	--	--

Ⓐ NOT A PAY ITEM. COST TO BE INCLUDED IN OTHER PAY ITEMS.

⊗ DENOTES ITEM(S) TO BE PAID FOR ON BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH CURRENT ROAD AND BRIDGE SPECIFICATIONS.

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TRANSPORTATION

COMM. NO. 30089A

THE CITY OF LYNCHBURG, VIRGINIA



DEPT. OF PUBLIC WORKS

ENGINEERING

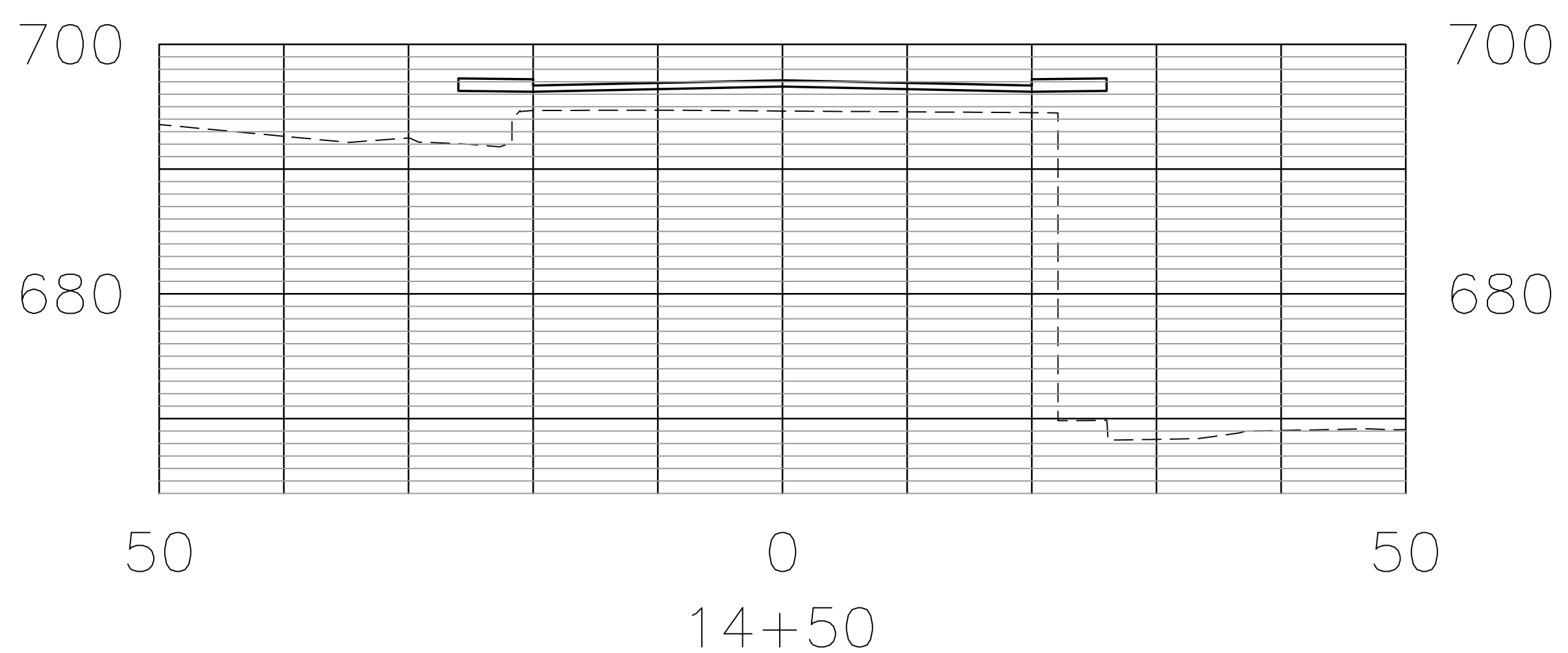
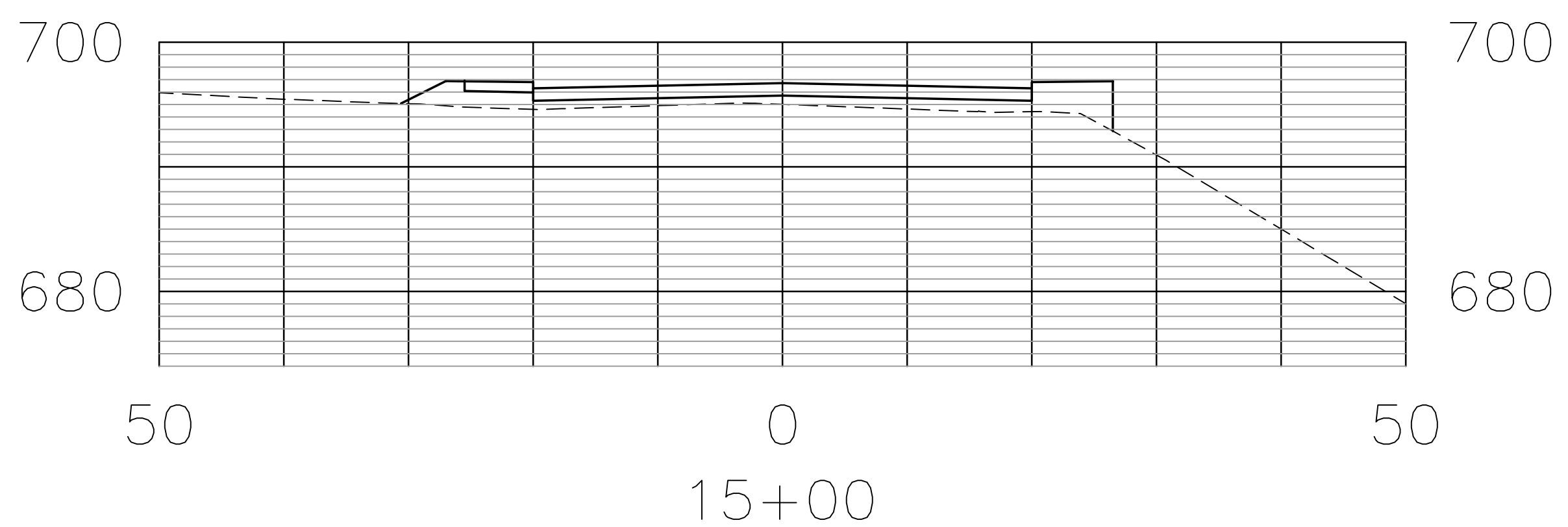
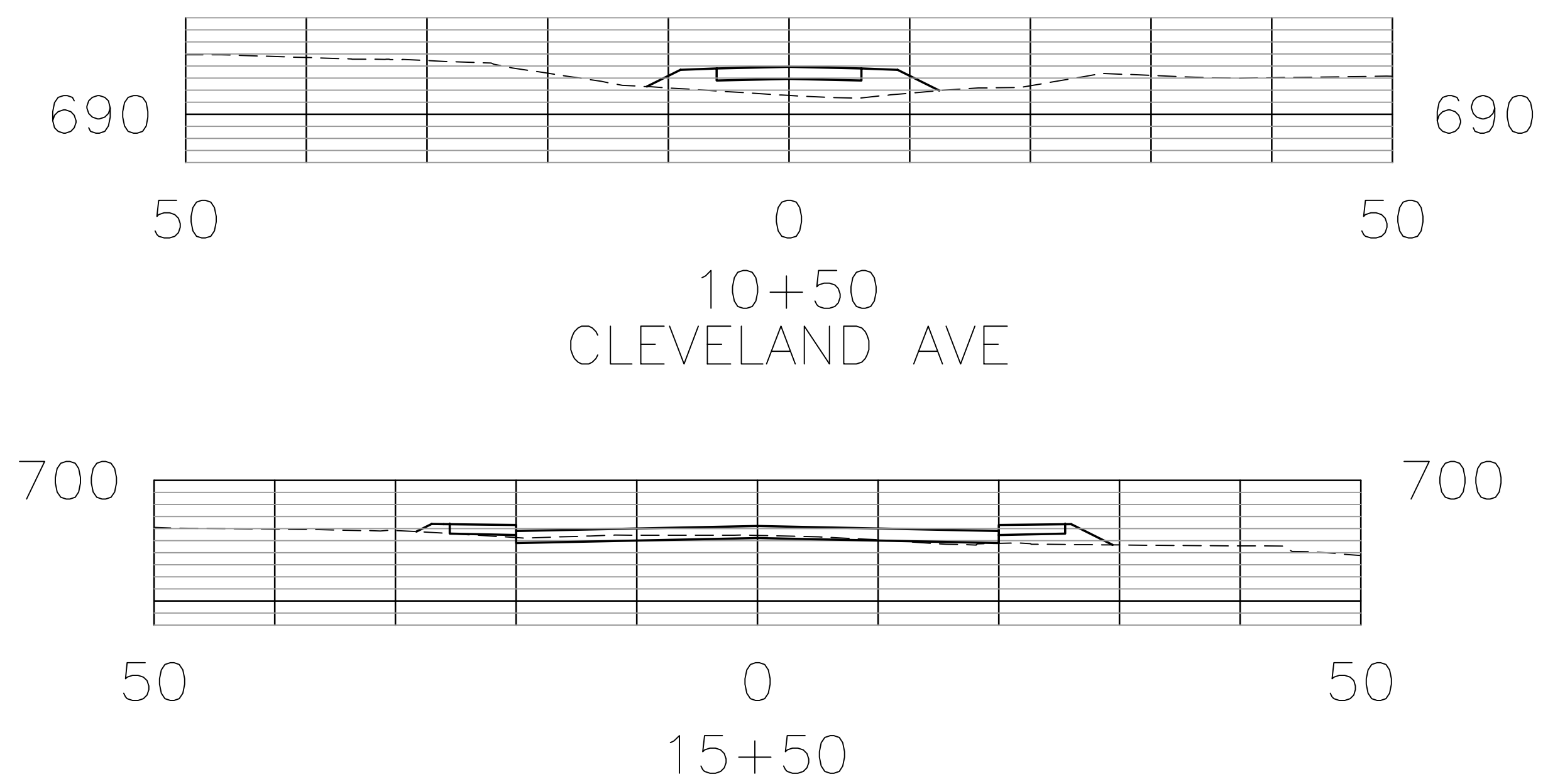
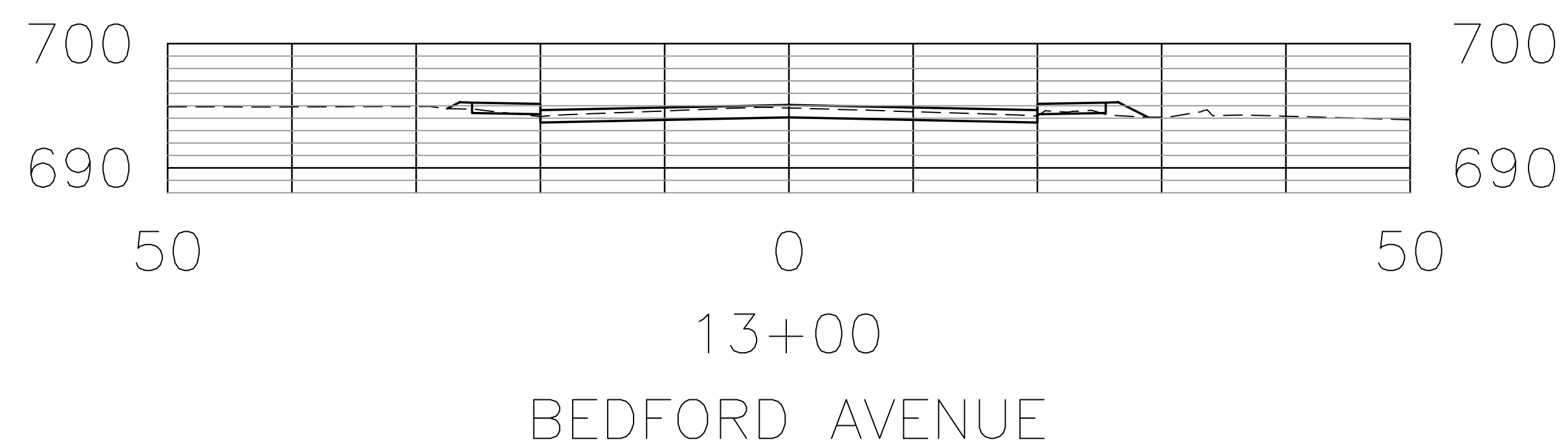
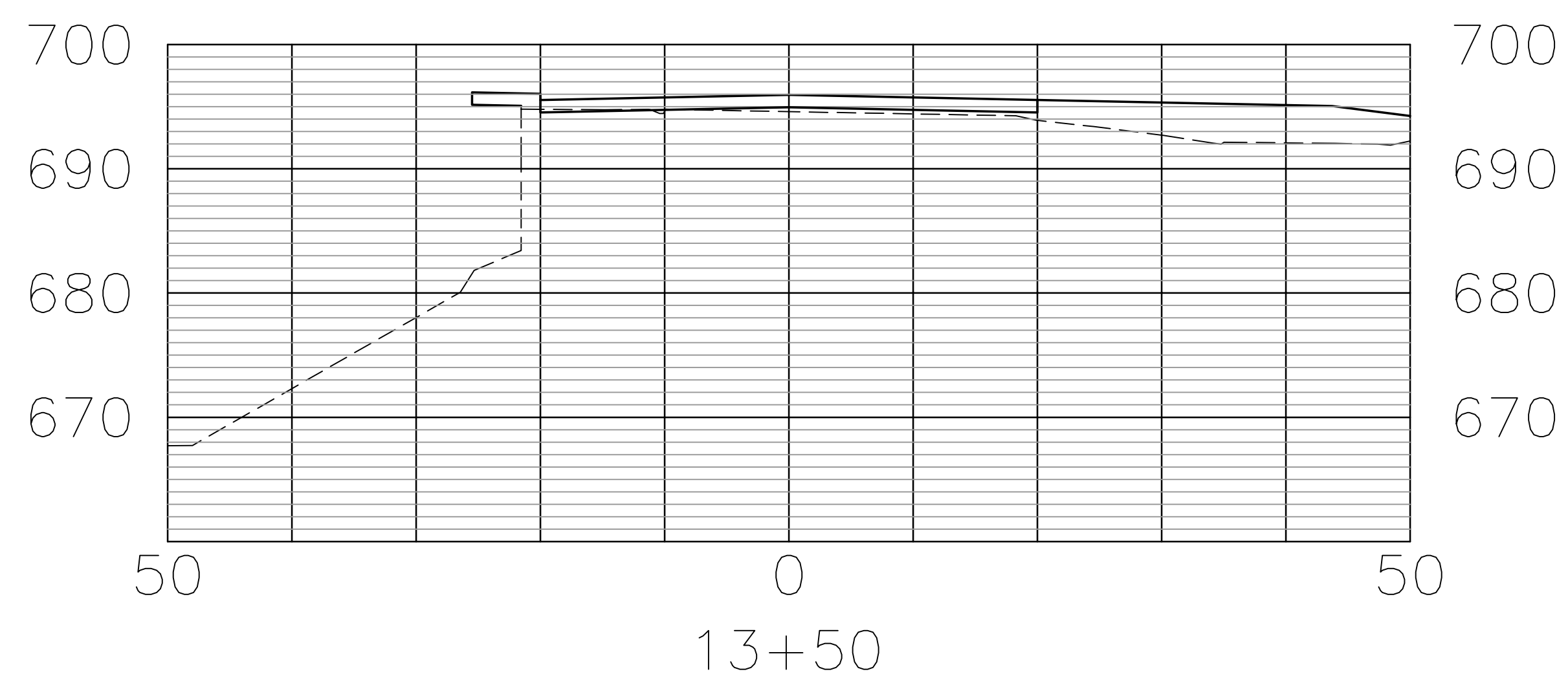
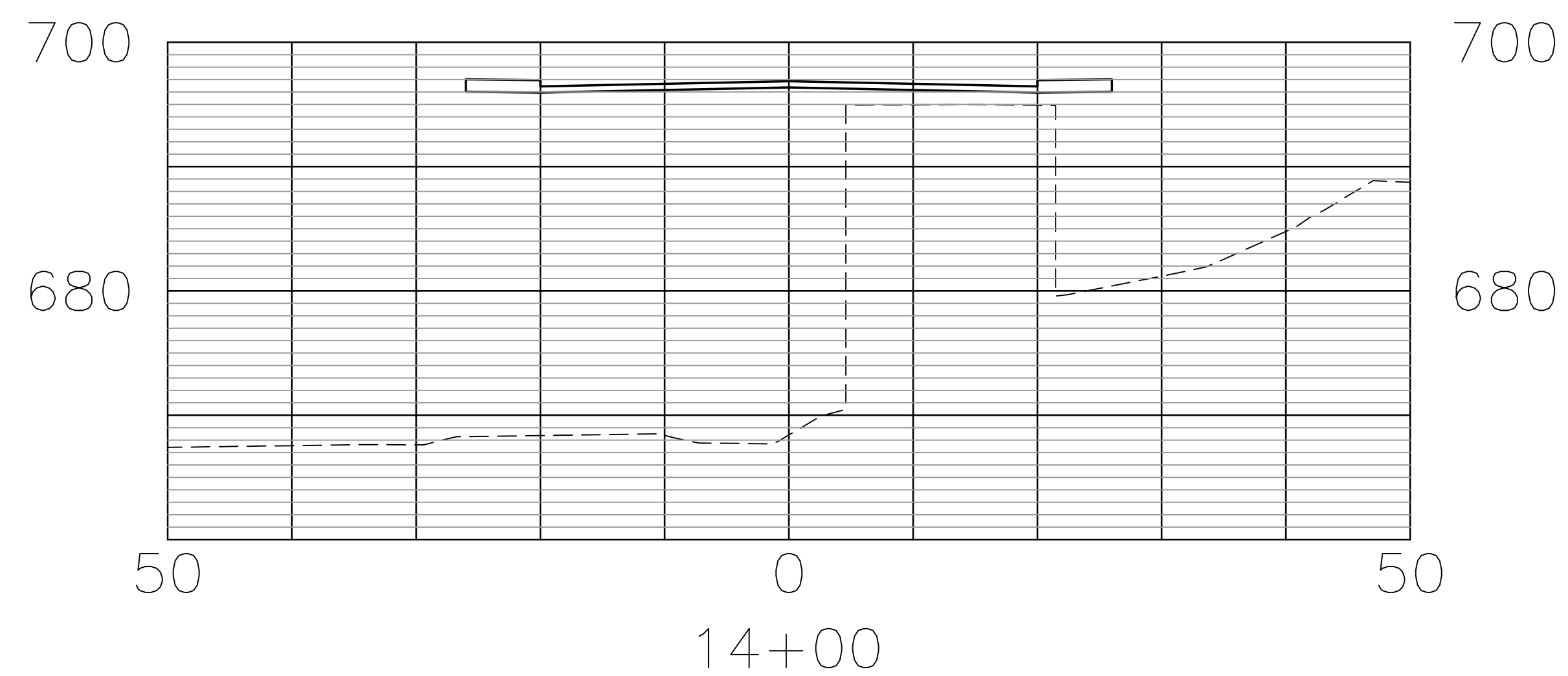
BEDFORD AVE. BRIDGE OVER NS RWY


ROADSIDE DEVELOPMENT

DESIGNED BY: GWB DRAWN BY: MGS CHECKED BY: GWB

NO. DESCRIPTION DATE SCALE: AS NOTED PROJECT NO.: 03036–BR

REVISIONS DATE: 14 JAN. 2005 SHEET: 23 OF 24



			THE CITY OF LYNCHBURG, VIRGINIA  DEPT. OF PUBLIC WORKS ENGINEERING BEDFORD AVE. BRIDGE OVER NS RWY		
			<h2 style="text-align: center;">CROSS SECTIONS</h2>		
			DESIGNED BY: GWB DRAWN BY: KSF CHECKED BY: GWB		
NO.	DESCRIPTION	DATE	SCALE: AS NOTED		PROJECT NO.: 03036-BR
REVISIONS			DATE: 14 JAN. 2005		SHEET: 24 OF 24